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HOW CAN THE PUBLIC HIGH SCHOOL REACH INDIVIDUALS?[1]

EDUCATIONAL thought at the present time is being directed from the subject-matter of instruction to the pupil himself, from the text-book to the pupil. We are hearing in our educational gatherings such sound doctrine as this: "The choice of subject-matter does not depend upon the laws of logic, but upon the law of the pupil's development," and "Educational value is not a quality which belongs inherently to any study; it is only as it fits the time, the place, and the child, that such value belongs to it." From Harvard comes the cry, "One of the most important functions of the high school is to facilitate the discovery and development of individual interests and capacities." Fifty years ago the education in our New England academies, if it was narrow, was at least precise and definite. The multiplicity of high-school subjects has broadened the secondary education of today, but, on the other hand, in attempting to teach one pupil too many subjects, mental energy has been dissipated. Hence has been brought about a reconsideration of the relative value of subjects in secondary education. It is not enough any longer to show that a subject is worth learning; we must show that it is better worth learning than such other subjects as are or may be displaced by it. Were there time, this paper might well go into

[1] An address before the Hampden County Teachers' Association by Mr. F. W. ATKINSON when Principal of the High School, Springfield, Mass. Mr. Atkinson is now Superintendent of Public Instruction in the Philippine Islands.

a consideration of values in secondary education. As for myself, I am of the firm conviction that the most important principle of value is that that high-school study is of most value which assists most effectually the highest possible evolution of the individual.

Heredity has preserved and transmitted to the individual certain moral, physical, and intellectual characteristics. By means of environment these may be modified. Under environment are included those conditions and influences without that modify or affect that within the individual. The pupil's mind is not a blank page, upon which we teachers may write what we will. Recent studies in heredity suggest limitations to the teacher's efforts. In these limitations there is something almost fatalistic. It is maintained by some men of science that education is useless, or even powerless, because human evolution is necessary, and that evolution always depends on heredity. To those "the child's whole moral destiny is contained in it while yet unborn, and in later life this destiny develops itself relentlessly." Unless we teachers believed to the contrary — that there was an ascent of life and morality, how hopeless our task would be. The powers attributed by some thinkers to education in the past have been exaggerated. It was, I think, Helvetius who asked if all the difference between men does not spring from nothing but the difference of instruction they have received : if talent and virtue alike cannot be taught. In spite of advances in biological science, some of our normal schools have continued to teach the "unfoldment" principle. If a thing will not unfold, we may, perhaps, lay hold of it and unfold it. There is, we believe, some remedy for the effects of heredity. But if a thing will not develop, there is nothing to do except to improve the environment and to furnish a motive. Incarnate in the organism of every human being is, first, the heredity or ancestral habit (or natural instincts), and, second, acquired from his environment, the individual habit (or artificial instincts). These artificial instincts constitute a power capable of keeping in equilibrium the heredity instincts. The problem of education, therefore, consists in creating in the mind at every stage of its evolution

artificial instincts capable of eliminating natural tendencies toward evil and the proper development of tendencies toward good. It is of the greatest importance that we know "where we are at" educationally. To repeat, the individual develops by innate forces, and in contact with an external evironment. The innate force cannot be changed at the will of the teacher. He is limited to partial control of the environment. We teachers, by the process of what the psycho-physiologists call "suggestion," are to cultivate these inherent powers and see that they reach their highest and finest growths.

The scientific cultivator of the soil must know agricultural science in its various departments, he must know besides, its many kindred sciences, chemistry, botany, physics, etc. Yet how much more must the educator know. If he would be fully trained for his profession he must know not alone physiology and psychology, but something of biology, anthropology, political, and other sciences. Above all, he must be versed in what John Stuart Mill called the science of human character. Perhaps the most imperative duty of the modern high school teacher is to attempt systematically and sympathetically to know the individual pupil approximately and to estimate the effect of the various influences upon him. By the study of what boys and girls are we learn of what they are capable. Difficulties in the way of observing the peculiarities of the pupil and his surroundings are the overcrowding of classes, the large number of classes to a teacher, and the departmental system of teaching. Pupil study takes time; teachers must do outside a great deal of correcting and preparation for recitation. Yet brief observations will not do. Teachers of small high schools and of academies have in this matter an advantage over city teachers. Whatever the hindrances, these differences in mental endowment and home surroundings must be known if the one principle of value is to be applied with any accuracy and precision. The high-school teaching corps which would put into successful operation an elective system of high-school course of study should remember that all knowledge, every time it is not assimilated, is an added burden to the

mind, and represents dissipation of mental energy, and that to determine the number and kind of subjects we advise a pupil to elect, we must consider not merely their nature, but the relation existing between them and the capacity of the individual mind. A wisely administered elective course of study without some pretty definite knowledge of individual needs and capacities, is an incongruity. The elective system has come, and come to stay, for it is only with such a system that a high school can adapt its opportunities and demands to the tastes and capacities of individuals. Greater the freedom in choice of studies, provided this freedom is used in accordance with interest, capacity, and future calling, greater the achievement.

Let me correct right here any false impression that may have arisen in your minds. Individualization has its limits, for the pupil must needs be early accustomed to regard himself a rising member of society, and, therefore, to consider others. The object of education is "simultaneously individual and social; it is, to speak accurately, the search for means to bring the most intensive individual existence into harmony with the most extensive social life." The individual should not be considered apart from the family, the state, and the race. The teacher who recognizes the dynamic value of natural inequality of capacities, and utilizes them, preferring to develop peculiar capacity, will do an important service for society. Under the system of pupil study used in Springfield, not only the average marks of the ninth-grade pupils are transmitted to the high school, but some description of the pupil himself. The questions submitted for guidance in supplying this information touch upon character, scholarship, special interests, outside work, home conditions, etc., leaving much to the latitude of the grammar-school teachers. From the parents still another kind of information has been obtained; they have answered questions in regard to health, eyesight, hearing, recreation, home study, reading, tastes, temperament, character, etc. The pupil has only been asked to furnish data on reading. The high-school teachers using the following as guide, have extended their observations to matters concerning the pupil's physical well-being, to

the phenomena of his mental life, to his relations with his parents, teachers, and fellows; also to his outside interests, home relations, etc.

Objections which were pointed out as likely to be brought against the plan have not been raised. Enough has been done to show that the plan is practicable, entirely in the interest of the pupil, and of great assistance to both teachers and principal. It has brought the grammar schools and the high school closer together. Not alone have the grammar school principals sent character sketches to the high school at the beginning of the pupil's course, but they have come to the school frequently and discussed with the principal the pupil's progress.

It has tended to unify the work of the teachers of the different departments. Instruction has become personal and individual. To use a football term, we have come to do "team work." Our monthly teachers' meeting has become a sort of seminar for the mutual understanding of individuals. Special cases have been discussed with a zest equal to that of a body of physicians. Some principles of educational diagnosis and educational *materia medica* have been brought to the front.

I haven't time now to describe many "cases"—individuals who need special treatment. I am sure, however, we might profitably spend our time in treating these—"absent treatment," of course. Has not every school its one or more delicate girls who return after the summer vacation looking tolerably well, to break down in the middle of the fall term, to be absent from school for a few days or weeks, to return and struggle on with their work, but finally in the spring to drop out altogether? What would you high-school teachers advise? No school? Partial course? Or what? Here is another individual, a girl who has too much imagination for her own good. What do you "prescribe" for her? Mathematics? Shall we attempt to balance, modify this imaginative tendency for the girl's good? How? Again, here is a boy who possesses no imagination, is commonplace and prosaic and yet an original thinker. Would you use all your efforts to illuminate and expand his life by teaching him imaginative literature, especially poetry, or would

you make the most of his ability to think clearly and forcibly? In the same recitation division there are an immature girl who patiently works out ten problems in the most mechanical way possible, and a lazy, indifferent boy—and yet no fool—who, once aroused from his indifference, performs one of the ten problems and shows that he can thoroughly and completely understand an example when he tries. Would you use the same methods in teaching these two algebra? Which one gets the more real discipline out of the recitation, the girl who performs the ten examples, or the boy who does one? Another boy is alive to every sensation from without; in the Latin and Greek classes his attention is easily distracted. The importance of manual training and laboratory work for such a boy is at once admitted. In experimentation and carpentering there cannot be wandering of attention. Shall such a boy be compelled to fit for college largely along linguistic lines? We teachers find ourselves as never before realizing that there is a great difference in the rapidity with which pupils can acquire knowledge and in their ability to recite what they have learned. As time goes on we are adapting our methods to the individual—this one is judged more by written work, that one by oral work. The nervous pupil is a legion, yet it is not sufficient to know that many high-school children are nervous, but that this or that individual is nervous. So it is just as important to know this one has trouble with poor eyesight or hearing and that one with some other physical defect. Growing out as a result of our pupil study we teachers have made a special investigation of medical inspection, and physical instruction. We teachers have come to believe that the physical strength of the individual and his power to do school work go hand in hand. Let us hope in the twentieth century that every city high school will have its gymnasium and its physician. Any plan of pupil study starts with a handicap if there is not a teacher of physical instruction who can make physical tests, measurements, etc.

In our endeavors to discover the boy or girl we have met with every coöperation from the parents. The letter of inquiry to the homes, besides furnishing valuable data to the school,

have reminded the parents of a necessity to see to it that the school and home work together. Consultations with the teachers and principal have resulted. In many cases, parents have made it known that recreation and repose, so important to the growing youth, were being encroached upon. Parents, too, have assisted in controlling "outside interests," which are, as everyone knows, a constant menace to the prosperity and efficiency of the school.

There never can be a perfect course of study exactly suitable to all until all are created equal in mental and physical capacity, and until all live in the same environment. This has been generally recognized, and it would be impossible to find a secondary school with its single course, although fifty years ago this was a very common educational phenomenon. The planners and administrators of the Springfield high-school course of study start with the assumption that every boy and girl possesses some peculiar capacity. Their principal object is to enable and encourage the largest number of boys and girls to pursue their appropriate studies.

It is evident to them there are limitations to this principle. Tastes and talent while revealed by some in the grammar school or early in the high school are not by all. Mr. Search, while in Pueblo, seems to have succeeded in showing how a school can be organized and administered without some sacrifice of individuality among its members. In reading a description of his plan, my breath is taken away to read, "Each pupil actually and absolutely recites every chapter and line of his Latin." We have not arrived in Springfield to any such educational Utopia as outlined in the Pueblo plan. The association of boys and girls in divisions and classes seems to be necessary as long as we have a limited number of teachers. Classes need to be about as small in number as taxpayers will permit; in Springfield they average from twenty to twenty-five. I am not sure but the association for a common purpose of high-school students into small teaching groups is the best thing. A tutor may better instruct one pupil than any group of pupils, but for the purposes of education association is better than isolation.

A course of study must be also consistent with the satisfaction of inevitable modern demands. Specialization must be restrained in so far as it is necessitated by demands of the community, by economical reasons or as it imperils the common corporate life of the school. A certain rigidity is justified by the increasing demands of the higher institutions for which the boys and girls are preparing, and by the variety of the callings in life for which they are preparing. In our course, certain studies are prescribed for everyone. These are such subjects as form the common stock of educated people. English, a study every pupil is bound to know, is required of everyone throughout the course. Too early specialization is made impossible in the first year by the "common course." The only choice to be made is between Latin, French, or German. In the second year, besides the prescribed English, either geometry or physics must be taken. As a student advances into junior and senior years, provided he is not preparing for a higher institution, with the exception of English no study is prescribed.

In the first year the student has become conscious, and his teachers, and sometimes his parents also, of whatever aptitudes and purposes he may possess. At the beginning of the summer term every pupil is required to make a list of his studies on blanks provided for the purpose, for the following year. This list is signed by pupil, and must be approved and signed by the principal and the parent or guardian. The minimum number of recitations a week for a sophomore shall be fifteen, for a junior sixteen, for a senior seventeen; of which thirteen for a sophomore, fourteen for a junior, and fifteen for a senior, must be prepared exercises. These elective blanks are all examined by the principal. This examination leads to a large number of consultations with grammar and high-school teachers, with pupils and with parents. The pupil is not permitted to be led by whim and caprice to take this or that study. Neither is he permitted to take up a study that strikes his fancy and drop it directly the novelty wears off, and perseverance is required. Able, but unambitious boys and girls are not allowed to take advantage of the rule designed to benefit their less gifted classmates. I refer

to the weekly minimum requirement. On the whole I believe the elective course is most favorable to the boy and girl of brains. The strong and ambitious are given every opportunity to take extra studies and make extra preparation. In beginning foreign languages, in algebra, geometry, and in the sciences, every fifth period is omitted by those who are doing satisfactory work. This unprepared recitation is used for individual instruction of those who need it. Frequently the hour is occupied in learning, under the teacher's instruction, how to study. Certain pupils take hold of a foreign language slowly, others start in with an aversion to mathematics. This extra period permits more thorough and patient teaching of these students.

Our experience convinces us that electives are desirable and practicable. Freedom of election, to be sure, brings its responsibilities to all parties concerned. Nothing but good, however, arises from this. The flexible course carefully administered has given to the teachers more attentive and more enthusiastic classes, has furnished more definite and precise tests of intellectual progress, and above all, a real opportunity to foster individuality and originality. It has brought about a better understanding and more sympathetic relations between the home and the school.

If the individual is the unit and the class the multiple, all cannot be judged by the same standards. As there must be a flexible course of study, so must there be a flexible marking system. As we say on our reports: "The aim of the school is to bring the work up to the best quality which the individual pupil is capable of. The flexible letter system of marking is used because it tends to place the teacher's judgment of a pupil's work on a broader basis than the numerical system allows; the work done is marked with consideration of the whole matter of the pupil's effort, ability, power of application, capability for improvement, degree of interest, and the resulting degree of scholarship." The A, B, C, D, E, system is used because it permits us to vary the scale according to the individual as far as possible; what is "C" work for one pupil might not be "C" work for another. Let it not be thought we mark

merit rather than scholarship. A boy or girl, however conscientious and faithful, cannot get a high rank unless this effort brings certain results. Intellectual self-reliance is what we aim to teach as well as the learning of facts. Our teachers give sufficient written work and know their pupils well enough to see through pretense of interest in the lesson. We do not give a pupil a final "A" rank unless we know that this pupil has the power of continuing to do this excellent quality of work. Beginning with October, reports are sent home bimonthly.

Beginning with September and after that every two months, sometimes oftener, teachers send to the principal the names of pupils who are doing unsatisfactory work; this does not mean necessarily they are not passing. In connection with the names there is given some statement of the reasons for failure or for unsatisfactory work. All these pupils are seen by the principal. In many cases parents are written to, and a number of parents are sent for. These warnings, coming as they do after a month's work, and while a month remains before records go on the books, are helpful and encouraging. The data furnished makes the interviews with pupil and parent definite and eminently satisfactory.

No marks are given for deportment. It is believed this is an individual matter. There is not school "self-government" in the letter of the law, that is, no formal senate or organization of pupils for the purpose; but there is self government in the spirit of the law. The body of pupils must not be the unit of government, but the individual. Every disciplinary measure should tend to inculcate in the individual the spirit of honor and self-control. The principle of self-government is carried out in various ways. Between recitations a five-minute interval of real relaxation is allowed, that is, talking is permitted during the passing and getting drinks of water. The individual student understands that he is to be in his seat and all quiet at the end of this intermission or else the privilege will be taken away from him. Also, because of this intermission, no communication is allowed during recitation time. Teachers are frequently called from their rooms and the pupils are left to themselves. There is

no supervision either in the reference library, lunch room, or in the yard. In these and other ways we try to create such a spirit that each individual pupil will feel it his duty to uphold the standard of school behavior.

The problem of the individual and the public high school has not been solved. I have but attempted to bring out a little more prominently the significance of individuality, and to outline some practical considerations which must be taken into account in its solution. There are many difficulties which seem to prevent its complete solution, but I think I see light shining through them.

FRED. W. ATKINSON

PHYSICAL GEOGRAPHY IN THE HIGH SCHOOL

Limitation of the subject.—A review of the older books on physical geography, and of some of the newer books also, will show that their various authors have not reached a clear agreement as to the limits of the subject. It has been allowed to run over upon physics and astronomy on one side and on geology, botany, and zoölogy on the other. As a result the central and truly geographical parts of the subject have as a rule been compressed below the space that they should occupy when properly developed. A way out of this confusion is found in a report recently made by the Committee on College Entrance Requirements to the National Educational Association. The reporting members of the subcommittee concerned with our science unanimously agree that "it should be the aim to exclude a number of subjects frequently treated under physical geography, but more appropriately included under other heads; for example, purely astronomical matter, certain principles of physics, the classification of animals and plants, and tables of geological periods. Important and interesting as these subjects are in their proper connections, it is believed that a better mental discipline will be obtained from physical geography when all its parts are closely joined to its leading theme," namely, "the physical evironment of man," under which the principal headings are "the earth as a globe, the atmosphere, the oceans, and the lands."

The agreement upon this limitation of the subject by the teachers present at the meeting of the subcommittee and the approval of their agreement indicated by the publication of their report by the National Educational Association marks a decided step forward from the indefiniteness of earlier years. Although slow in coming, the limitation is really an outgrowth of Ritter's teaching that geography is the study of the earth in relation to man, from which one may naturally deduce the definition of physical geography—or physiography—as the study of those features of the earth which are involved in the relation

of earth and man; that is, the study of man's physical environment. In later years of education the physics of the atmosphere, the forms of the land, and other branches of the subject may be studied for themselves alone under the general name of terrestrial physics or under such special names as meteorology, geomorphology, and so on, without special regard for their human relations; but when first encountered the limitation of the subject to man's physical environment has the great advantage of holding all its topics close to their most important and interesting theme. The earth's form and size, its rotation and revolution are geographical as well as astronomical topics; but a list of planets, their dimensions, distances from the sun, and periods of rotation and revolutions are astronomical topics. Let the teacher introduce these interesting items if her interest turns towards astronomy, and if time can be spared for the purpose; but the space that they would occupy in the text-book should be saved for the fuller presentation of strictly geographical topics. To illustrate this by personal experience I may note that the nebular hypothesis held its inherited place in my lectures only so long as the richness of the rest of the subjects was not sufficiently developed to crowd out so irrelevant an astronomical theory.

The forms of the land can be well seen only through the eye of the understanding, which shows them to be the product of agencies that have operated for long periods of past time; the "shut-in" valleys of the St. François Mountains of Missouri and the Baraboo Ridge of southern Wisconsin are never appreciated until they are seen as involving long stretches of time in their preparation. Thus far time is an element of geographical as well as of geological consideration; but the specific subdivision of past time into periods and the consideration of the events that occurred during those periods in their historical order is purely geological. By all means let the inventive teacher bring in abundant and helpful illustrations from all pertinent fields of knowledge, but let the teacher also recognize that there is a well-defined theme in physical geography whose logical development must govern the selection of topics that really constitute

the framework of the course. A fact may be interesting and important, but it must also be pertinent to our science if a place is to be given to it in a well-organized text-book of physical geography.

Geographical evolution. — The contrast between older and newer methods of treatment is as well marked as between the older and newer limitations of our subject. In the days of Ritter many subdivisions of physical geography, and especially the chapters devoted to the forms of the lands, were treated empirically, because no adequate explanation had then been found for them; and the relation between organic forms and their inorganic environment was explained, when explained at all, by the philosophy of teleology — the philosophy which, among other things, regards the earth as prepared for man — because no conception had then been gained of the duration of the past time or of the development of the various forms of life. Since those days two great principles have been discovered, both of vast importance to geography. One is the evolution of land forms, contributed from geology; the other is the evolution of living forms, contributed from biology. Great advances have also been made in the physical study of the atmosphere and the ocean. As a result it is now possible to treat all aspects of physical geography in a rational manner, and at the same time to show the fundamental importance of the relation between physical environment and life. The changes thus wrought by the century are revolutionary in physical geography as well as elsewhere, and it is incumbent upon us to see that our pupils reap full advantage from the new opportunities thus broadly opened before them.

Causes and consequences. — There is no better measure of the degree of modernization in the treatment of physical geography than the evenness with which a rational or explanatory treatment is applied to all its parts. In the earlier books, explanation was offered only for the more active phenomena, such as winds, currents, and volcanoes; geographical features that were not evidently the result of active processes were merely described. In the newer books the attempt is made to extend explanation uniformly all over the field of study. A review of older and newer

methods is especially interesting in regard to the forms of the lands. Sand dunes, for example, have nearly always been mentioned in connection with their simple and evident origin by wind action; but the erosive action of weather and water in shaping valleys has been slowly and incompletely introduced. Cañons have been given too much importance, and only the more recent books have instanced wide open valleys and worn-down mountains as illustrating the advanced stage of destructive development in which cañons are but the younger stage. It is undoubtedly true that many items of the subject are not yet fully explained, but there are many others for which good explanation is well assured. Let the latter be selected to form the body of the subject in elementary teaching, while the former are left aside for the present, or given at most only a subordinate place. The judicious application of this principle will not impoverish the subject by reducing it to scanty dimensions, but will enrich it by the addition of intelligent explanations. The pupils will from the outset gain the habit of looking at the subject in a rational way. They may to advantage even be prejudiced with the opinion that all its parts are within the reach of explanation; then, if an unexplained fact is encountered later, it will be attacked vigorously in the belief that explanation can surely be found by persistent study.

Equally significant with explanatory treatment is the applied treatment; that is, the presentation of every item as an element of the environment in which the life of the earth has been developed, and by which it is still conditioned at every turn. This second test of modernized treatment is as valuable as the first. When the applied treatment of the subject is understood it will be recognized that plants, animals, and man should not be given special chapters for themselves in the modern limitation of the contents of physical geography, for the very sufficient reason that mention of them is distributed all through the subject. Gravity determines the "standing" position of plants and animals. Latitude and longitude should be taught as devices by which man takes advantage of the form and rotation of the earth to determine his position on it, not as abstract

mathematical problems. The chapters on temperature and moisture give opportunity for mentioning many appropriate consequences as to the distribution of plants. Under the description of the shallow border of the oceans, where the waters lie upon the so-called "continental shelf," proper opportunity is found for referring to these waters as the habitat of food fishes and therefore as valuable fishing grounds. A general account of the larger land forms leads up to the control exerted by continents, mountains (especially the Himalaya), and deserts (especially the Sahara) upon the distribution of man and animals. Under mountains reference is made to their significance as refuges for conquered tribes or peoples. Avalanches and landslides are not finished with a description and explanation of inorganic phenomena alone; they are also presented as dangers to which people living in mountain valleys are subjected. Here we may well introduce Guyot's eloquent sentence as a practical guide in our work: "To describe without rising to the causes or descending to the consequences is no more science than merely and simply to relate a fact of which one has been a witness."[1] The phrase, "causes and consequences," thus comes to serve as a touchstone by which both the explanatory and the applied treatment of the subject may be easily tested. Just as a topic that is beyond explanation had better as a rule be omitted, in order to give fuller attention to topics that can be explained, so a topic that has no connection with the manner in which organic forms are distributed or with the occupations in which men are engaged should in nearly all cases be excluded as of less importance than those topics in which such connection is manifested. Neither test of the touchstone should be applied rigidly or arbitrarily; but the habit of looking for causes and consequences is a most useful aid in the development of the subject. No one need fear that the reasonable application of this test will deprive physical geography of anything that rightly belongs to it.

The omission of "man," "animals," and "plants" as chapters in physical geography frequently causes objection on the part of those who hold to the older plan of treatment. Against

[1] *Earth and Man*, 1849.

such objections I would urge the following considerations: The necessity for the study of man comes largely because the treatment of geography proper has been too empirical and unintelligent; when this old fashion is corrected there will be no need of a chapter on man in physical geography. Plants and animals are properly subjects for zoölogy and botany; their structural features and their classification cannot be taught merely as chapters in another subject. On the other hand, palms and pines, elephants and polar bears may be freely mentioned as exhibiting in their distribution the effects of climatic control; wheat and corn fields are appropriate products of the rich soil on our prairies, in contrast to the forests which grow on the stony soils of our Appalachian mountains and uplands. It is not necessary to have studied the biological relations of these organic forms in order to make intelligent use of them as illustrations of the effect of environment. But the actual distribution of useful plants and animals is strictly a geographical subject, and no intelligent or effective treatment of political or economic geography can be reached if the facts of distribution are omitted from it.

Physical geography abroad.—It is interesting in this connection to glance at the treatment of physical geography abroad, in contrast to the treatment recommended by the subcommittee of the National Educational Association. As to limitation of content there is the same wide diversity that has hitherto existed here, but without any strong movement now apparent to reduce the subject to better definition. Absence of proper limitation is most apparent in the "Physiography" of the South Kensington examinations in England, where the subject is a sort of extension of a very elementary treatment of physical geography. It reaches as far as spectroscopic observations of stars and nebulae, evidently because of the presence of an astronomer on the committee in charge of this division of the examinations; and the physical geography of the lands is almost lost sight of, evidently because no physical geographer is on the directing committee. This is the more remarkable and regrettable when it is remembered that the term, physiography, has been adopted because of

Huxley's use of it as a title for a series of lectures in 1869 and 1870. The lectures were reduced to book form in 1878, and in the preface then published we find the following interesting statement:

I borrowed the title of "physiography" as I wished to draw a clear line of demarcation, both as to matter and method, between it and what is commonly understood by "physical geography." Many highly valuable compendia of physical geography, for the use of scientific students of that subject, are extant; but, in my judgment, most of the elementary works I have seen begin at the wrong end, and too often terminate in an *omnium gatherum* of scraps of all sorts of undigested and unconnected information; thereby entirely destroying the educational value of that study which Kant justly termed the "propædeutic of natural knowledge." I do not think that a description of the earth, which commences by telling a child that it is an oblate spheroid, moving round the sun in an elliptical orbit, and ends without giving him the slightest hint towards understanding the ordnance map of of his own county; or any suggestion as to the meaning of the phenomena offered by the brook which runs through his village, or the gravel pit whence the roads are mended, is calculated either to interest or to instruct. And the attempt to convey scientific conceptions, without the appeal to observation, which can alone give such conceptions firmness and reality, appears to me to be in direct antagonism to the fundamental principles of scientific education. "Physiography" has very little to do with this sort of "physical geography." My hearers were not troubled with much about latitudes and longitudes, the heights of mountains, depths of seas, or the geographical distribution of kangaroos and *Compositae*. Neglecting such points of information—of the importance of which, in their proper places, I entertain no doubt—I endeavored to give them, in very broad, but, I hope, accurate outlines, a view of the "place in nature" of a particular district of England, the basin of the Thames; and to leave upon their minds the impression that the muddy waters of our metropolitan river, the hills between which it flows, the breezes which blow over it, are not isolated phenomena, to be taken as understood because they are familiar. On the contrary, I have endeavored to show that the application of the plainest and simplest processes of reasoning to any one of these phenomena, suffices to show, lying behind it, a cause, which again suggests another; until, step by step, conviction dawns upon the learner, that, to attain to even an elementary conception of what goes on in his parish, he must know something about the universe; that the pebble he kicks aside would not be what it is and where it is, unless a particular chapter of the earth's history, finished untold ages ago, had been exactly what it was. It was necessary to illustrate my method by a concrete case; and as a Londoner addressing Londoners, I selected the Thames and its basin, for my text. But any intelligent teacher will have no difficulty in making use of the

river and river basin of the district in which his own school is situated for the same purpose.

It is said that much disappointment was felt by those interested in the development of rational methods in education, on finding that teachers in various parts of England were following Huxley in taking as their text the Thames instead of their local river! Still greater disappointment may be felt on seeing how far the spirit of what Huxley understood under the name, physiography, is lost sight of in the books that undertake to present the requirements of the South Kensington examinations on that subject. It may, I believe, be fairly claimed that the recommendations of the conference on geography, above referred to, much more nearly represent the "sort of physical geography" in which the great English naturalist was interested than do the outlines issued by the most authoritative board of examinations in England today.

An explanatory treatment is usually applied in German and French school books to the active phenomena of the earth, but the treatment is not uniformly characteristic of all parts of the subject. Applied treatment is almost universally lacking in European schoolbooks on physical geography; and when encountered it seems to be introduced by accident rather than as the result of a systematic plan. Its omission is especially characteristic of the German books, whose comprehensive thoroughness is often remarked, but whose plan would place them rather under the heading of terrestrial physics than under physical geography, as here defined. Hence it may be said that when the recommendations in the report of the National Educational Association reach the stage of general and practical application, physical geography will be better organized in this country than in Europe; a result that may be placed to the credit of the unofficial educational organizations of the country, which are so generally influential in bringing about reforms, and which are here very much less hampered by the restrictions of a centralized or bureaucratic control of educational matters than is the case abroad.

Let us now turn to the problem of the arrangement of topics under the four chief headings of our subject.

Systematic treatment: the atmosphere.—It is important that a careful arrangement as well as a judicious selection of topics should be made, in order that the subject should advance systematically, in as logical a progress as actually prevails in geometry or Latin, or as is possible in botany or zoölogy. Passing the earth as a globe for lack of space, an example of the arrangement may be given under the heading of the atmosphere, by which the correlation of the prevailing winds and general distribution of rainfall may be impressively presented.[1] First comes the general circulation as determined by the difference of temperature prevailing between the equator and poles, and as affected by the eastward rotation of the globe. Well defined consequences as to the distribution of pressure and the oblique movements of the upper and lower currents are reasonably deduced from accepted physical principles governing such movements, but the difficulty here is that the real explanation of the winds cannot be presented in an elementary fashion; the problem is inherently complicated, and only the more important results are appropriate for high-school pupils; hence the general principle that cause must be presented with fact cannot here be fully carried out. Difference of temperature and the rotation of the earth may be mentioned as the chief controls of wind movement and direction, but the logical connection of cause and effect cannot be fully explained. Nothing need be said about the distribution of atmospheric pressure, unless the text and the teacher are prepared to explain the low pressures of high latitudes. It is true that it has become fashionable in recent years to copy Buchan's pressure charts in elementary books, but it would be more philosophical to postpone them to more advanced study. Variations of pressure at sea level are not of importance as factors of geographical environment; and it is difficult to give a simple explanation of the observed variations. The winds determined by general differences of equatorial and polar temperatures may be called planetary, because such winds are to be expected on all planetary bodies, and the chief members of the planetary

[1] See an article on this subject in the *School World*, Macmillan, London, 1899.

circulation may be described along with the rainy and dry belts that they control. The second step is more intelligible, as it involves the effect of seasonal changes of temperature, themselves well explained by the changing declination of the sun; relatively simple modifications of the planetary wind system (and of its rainy and dry belts) are thus described, to which the name of terrestrial winds are to be given. The shifting of the equatorial calm belts and the associated development of monsoon winds and subequatorial rains in the summer hemisphere find mention at this stage: also the relaxation of the westerly winds of the temperate zone of the summer hemisphere, and their acceleration in the temperate zone of the winter hemisphere, with the correlated migration of the tropical calm belt and the associated occurrence of the winter subtropical rains. The third step is made by considering the irregular distribution of land and water, from which it appears that the systematic development of the terrestrial winds is better seen in the southern hemisphere, while strong modifications of winds and rainfall are associated with the great alternations of land and water areas of the northern hemisphere. It may be fairly claimed for this method of presentation that it binds together all the elements of the problem, temperature, pressure, winds, and rainfall, in a rational association, by which the memory as well as the understanding is greatly aided. Nearly all the topics introduced under the atmosphere may be appropriately attached to the scheme of treatment here outlined and all may be led forward to important consequences.

The ocean.—Under the ocean, the sequence of items is fairly well agreed upon. They are: the form of the ocean basins, the composition and temperature of ocean water, the deposits on the ocean floor, movements in the form of waves, currents and tides, influence of climate, and control over distribution of organic forms. The only point on which I would lay special emphasis here is that tides should follow waves (with currents between, as the consequence of winds and temperatures), so that the tidal currents may be explained as the orbital movements of the water in the tidal waves. Under tides, a good explanation of the

tide-making forces may be given to pupils who have studied geometry and physics; otherwise, it is hardly worth while to attempt explanation. It should suffice to point out that the tides run on lunar time, and hence must in some way be associated with the moon. An explanation that does not explain is not worth its time.

Activities of the lands.—Under the lands, there is as yet no general agreement as to the order of topics, or indeed as to the topics themselves. After various experiments in this division of the subject, I have adopted the scheme indicated in the following statement. A general account of the activities or habits of the lands opens the subject, and here we find the best warrant for the previous consideration of the deep ocean floors, in themselves so remote from relations with man, but so excellent a foil for the presentation of the real characteristics of the lands. The sea floors are cold and dull (no sunlight reaches them, though they may have some illumination from phosphorescent animals, as is indicated by the eyes and the color patterns of abyssal fauna); their oozy deposits are almost as monotonous as their gently undulating form; they are silent, and without change of weather or variety of climate. The lands are alternately light and dark, warm and cold, even and uneven, active and quiet, noisy and silent; here is one composition there is another, with great differences of weather and climate in time and place, and the surface is nearly everywhere wasted and furrowed by valleys down which the loss of the land is carried away by rainfed streams to become the gain of the sea. Now that evolutionists as well as poets recognize that variety is the very spice of life, there is little wonder that the land surface and not the sea floor has come to be the home of the higher animals, higher in organization, in instincts and in intelligence, with man at their head. A general chapter on the land may thus be made of much interest and value. Special emphasis should be given to a brief account of weathering and washing, topics of great importance in their later applications. As at present advised, I should also include in this preliminary chapter some brief mention of the slow movements of the earth's crust, whereby the outline of

the land areas is slowly varied through the ages. Here a sea-floor border is added to a continent by a movement of elevation; there a land border is submerged beneath the sea by a movement of depression. It is true that these statements are empirically introduced in this connection and that no explanation of them can be attempted, for the cause of crustal movement is a puzzle even to the advanced student of geology. The sufficient reason for introducing brief mention of crustal movement at this early stage is that examples of their effects, encountered a little later, may be then understood more easily.

Features of the lands.—The lands are next to be treated in several chapters. Through each chapter the development of the land forms there considered should be treated from the point of view of geographical evolution, a problem too large for presentation here; it has lately been given separate publication elsewhere.[1] In recent years I have made a particular point of beginning this division of the subject with the chapter on coastal plains, because of all land forms they are most easily apprehended; that is, the origin of young coastal plains; the position that they occupy with respect to their surroundings; the developmental changes produced by the destructive attack of weather and water can all be readily understood by young scholars without more preliminary study than is given in the general chapter on the activities of the lands. The great advantage resulting from a full and clear understanding of the first example of land forms is that a serious beginning is thus made of treating land forms genetically and rationally. Although not usually allowed much space, coastal plains, modern and ancient, young, mature and old, uplifted and depressed, include a great variety of forms; the reasonable explanation that can easily be given to all these forms affords the pupils good grounds for the expectation that plateaus, mountains, volcanoes, and other forms in the following chapters may be no less rationally treated. This expectation is not disappointed in the chapter on plateaus, or in the earlier

[1] See articles on "The Rational Element in Geography," *Nat. Geogr. Mag.*, Vol. X, 1899, pp. 466–473, and "The Geographical Cycle," *Geogr. Journal* (London), Vol. XIV, 1899, pp. 481–584.

examples that may be given of simple mountain forms; but when lofty mountain ranges are reached, it is not desirable to attempt an explanatory discussion of their greatly deformed structures, or of all their complicated forms. Fortunately, the pupil will not complain of lack of material if nothing more is attempted under this subdivision of the chapter than the description, with some explanation, of peaks, ridges, spurs, passes, ravines, valleys, and slopes. The treatment of subdued and worn-down mountains that follow lofty mountains is much simpler and may be readily enough understood. Worn-down mountains, now uplifted and again undergoing dissection, include examples of many regions whose description and explanatory treatment today is a refreshing contrast to the inattention of earlier years.

Volcanoes form a chapter that may naturally follow mountains; but it is important to distribute earthquakes through both these chapters in order to remove the old idea that they have only to do with volcanic action. "Volcanoes and Earthquakes" as a chapter heading has no logical place unless it is paralleled with "Mountains and Earthquakes" as another. Neither heading is a good one; it would be as appropriate to say volcanoes and eruptions, or mountains and dislocations; for eruptions and earthquakes are both subordinate topics under volcanoes as dislocations and earthquakes are under mountains. Furthermore, earthquakes are associated only with growing mountains and volcanoes, and not with the old stages of these forms; hence the permanent association with either land form indicated by chapter headings is inadmissible.

Rivers and valleys.—Under all the topics thus far mentioned, rivers and valleys have had an essential place, for it is impossible to treat the development of land forms, or to describe existing forms in a rational manner without constant reference to the valleys that have been worn in them and to the rivers by which the waste is washed away along the channel in the valley floor. From the very first, rivers and valleys have been made characteristic parts of the land surface; lakes are directly associated with rivers because, when considered in their true light, they are but "ephemeral phases in the history of rivers." Rivers and lakes,

and the valleys and basins they occupy, are therefore considered wherever need be in connection with plains, plateaus, mountains, and volcanoes. But there are numerous details of interest and importance that deserve special consideration under the guidance of a scheme of river development; hence a chapter on rivers and valleys may advisedly follow those already mentioned, reviewing and extending what has already been presented. The development of meanders and cut-offs, the migration of divides and the resulting rearrangement of drainage systems by river capture, the peculiar features of valleys whose streams have been beheaded, are details of this kind. This is a strong departure from the English method, sanctioned by the South Kensington examinations, as at present planned, of placing lakes and rivers under the same general division with the oceans, because they are all water: a method that cannot be too strongly condemned by those who desire to see a reasonable treatment of physical geography introduced. As well take clouds and rain from the study of the atmosphere as lakes and rivers from the study of the lands.

The waste of the land.—There is a chapter that naturally follows rivers and valleys in which I have become increasingly nterested during the past ten years on account of its growing richness; the more it is considered the more it seems to contain. It may be entitled, "The forms assumed by the waste of the land on the way to the sea." Like the chapter in which rivers are especially considered, this one repeats certain items already met with under the four chapters on the chief classes of land forms; but many other items which there was then no sufficient opportunity to describe without too long a delay may now be taken up deliberately. The process of weathering, whose importance is so great that it was presented as an essential characteristic of the lands, is now reviewed, thus leading to a consideration of the sheet of rock waste or discrete, as Gilbert calls it, with which so much of the land is covered, and more particularly to an examination of the forms assumed by the slow-moving waste as it creeps and washes down the slopes to the valleys, and as it is carried along by streams. It may be fairly claimed for this

chapter that it gives a greatly broadened view of familiar facts and presents them in their true relations. We are all familiar with the forms assumed by the waters of the land on the way to the sea, springs, brooks, rivers, lakes, and falls: we should be equally familiar with the forms assumed by the waste of the land on the way to the sea, talus slopes, alluvial fans, flood plains, deltas.

Climatic control of land forms.—Thus far, it has been tacitly implied that the development of land forms always goes on under what may be called a normal climate; that is, a climate in which the precipitation, chiefly in the form of rain, is sufficient to fill all basins to overflowing. All that preceded concerning land forms may be regarded as a consideration of the control of land forms by normal climate. Attention must now be given to two other climates, the arid and the glacial. Wind in one case and ice in the other, replaces water as the chief agent of transportation; and peculiar land forms are developed under these peculiar controls. Here are placed those peculiar regions known as interior drainage basins, in which certain highly specialized correlations of form and process are found; correlations that are very little understood by explorers, if one may judge by the unappreciative method of description often adopted. Nothing is more significant of advance in the rational treatment of geography than the recognition lately allowed to forms of glacial origin; and it is truly gratifying to find that there are children now in schools who know a drumlin when they see it, and who can give it a name that will concisely suggest the meaning desired to a hearer of like intelligence. Additional interest attaches to the chapter on the control of land forms by special climatic conditions when it is shown that climate is not constant, but that in certain parts of the world the climate of the recent past (as the earth counts time) has been different from that prevailing today, and that many marks of the past climate are still distinct in the existing topography. Thus topographical forms produced under the former normal climate of many basins now arid, and under former glacial climate of many regions now normal, are appropriately introduced, on branches that depart in an orderly fashion from the main theme; and this I hold to be just as important in geography as in geometry.

Shore lines.—The chapter on shore lines may be advisedly placed at the end of a general course on physical geography, for it cannot be introduced earlier without interrupting the sequence of chapters just sketched, and because it fittingly follows all of them. It is entirely inappropriate as a part of the study of the oceans, although it was there placed by Peschel. The natural association of this topic is with the forms of the land. One of the most pleasing results of the rational study of shore lines is the discovery that their development may be treated just as systematically as that of land forms; and indeed that many general principles established in the study of land forms as affected by the subaerial agencies of erosion, are equally applicable to the seashore, when allowance is made for the marine agencies of erosion there in action.

Plants, animals, and man.—It may be noticed that no place is given in the list of topics here considered to plants, or animals, or man. This is because organic forms do not in themselves constitute any part of the content of physical geography, however largely they may enter into geography proper. It is therefore proper not to place plants, animals, and man, as chapter headings equivalent to plains, rivers or shore lines, unless merely with the intention of gathering in one place and emphasizing the "consequences" already presented in connection with their physiographic controls; but on the other hand, it is extremely desirable that plants, animals, and man should receive frequent mention in every chapter, in illustration of the organic consequences that follow from controls exerted by physical environment or organic opportunity. Herein the method of the American school, if the recommendation of the subcommittee of the N. E. A. may be so called, differs distinctly from that of the European, in which the physical features of the earth are considered for themselves alone and without regard to the conditions, favorable or unfavorable, that they offer for life, be it low or high. The omission of "consequences" seems to me almost as unfortunate as would be the omission of "causes."

Areal geography.—There is another omission from the content of the subject as outlined above that may excite comment,

The areal study of the several continents, as made up of physical features of various kinds, is not attempted. This is because it is not possible to give both a general and an areal course on physical geography in a single year. Neither part of the course could be properly developed in so short a time. It is true that some knowledge of the physical geography of North America and Europe are very important, indeed, that it ought not to be sacrificed to the impossible by attempting to present the physical features of all the continents as a supplement to the general principles of physical geography in a single year. Instead of teaching the areal physical geography of even North America and Europe in the general course, it is better to use many features from these grand divisions as type examples in the several chapters to which they belong, always locating the examples by reference to maps. Clear ideas of some few things will thus be gained instead of vague and imperfect ideas of many things. If there is time to spare, a following course on the physical geography of the continents would be interesting and profitable; but as part of a general course this subject cannot receive adequate attention.

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Harvard University

(*To be continued.*)

CHANGES IN THE REGENTS' SYLLABUS

WITH the university convocation held at Albany last June, it may be said that the work of revising the 1900 edition of the regents' syllabus closed.

In 1895 the associated academic principals appointed a committee of three to represent them in the work of revision. While this committee had no original authority, yet from the outset its work with the officers of the board of regents has been the closest, and its suggestions to them have been received with the greatest consideration, and in a majority of instances approved. The committee began its work by mailing a letter of inquiry to every principal, superintendent, and college president of the state. These replies were carefully studied. The number of letters and circulars relating to the work which the committee sent out exceeds two thousand, not including the letters and circulars necessary in the work of the subcommittees on English, history, mathematics, and science.

For the past two years the subject of "Syllabus Revision" has had a prominent place on the programs at the principals' conference and at convocation. The committee has made four reports. These reports have been published in different educational magazines[1] and in the proceedings of the bodies receiving the report. Before the final report was made at the principals' conference last December, a circular containing a summary of the proposed changes was mailed to every principal, superintendent, and college president in the state, and to several prominent school men in other states. This summary was discussed in detail by the conference. Special reports also have been made upon literature, history, mathematics, and science, and published in the proceedings of the Fifteenth Annual Conference of the Associated Academic Principals. There has been

[1] SCHOOL REVIEW, October 1899: *New York Education*, March 1899; *Convocation Proceedings*, 1898, 1899; *Proceedings of Academic Principals' Conference*, 1898, 1889.

an attempt to make the revision in the interest of all concerned, and to give the widest publicity to the proposed changes. In addition to the above, the director of the high-school department of the University of the State of New York, in his report for 1898, pages 384–388, gives a summary of the proposed changes up to that date. In April of the present year an edition of the new syllabus has been published and circulated as "Proof Under Revision." Criticism has been invited, and many valuable suggestions have been thus received. It is highly creditable to the authors of the 1895 edition that five years' use revealed so few things to be changed. The bulk of the 1895 edition stands with few changes in the 1900 revision.

During the last few years educational thought has been largely directed by the strong reports of committees carefully chosen by representative educational bodies to study particular phases of education. These reports have influenced to a large degree the revision of the syllabus, particularly so the report of the Committee of Ten, the Committee on College Entrance Requirements, the Committee of Fifteen, the Columbia Conference, and the Committee of Seven. As a result of the work of the regents' office and the principals' committee, we have the present edition, which, among other changes, contain the following:

The preacademic studies remain the same, but the instruction is supposed to include more of history, civics, and drawing than heretofore. No separate examinations will be given in these branches for the next five years, but it is highly probable that in the 1905 revision all three will be included in the preliminaries—the subjects covered by the first eight years of school work. While this change does not meet the requirements of the Committee of Fifteen, yet it is a long step in that direction. It also helps to enrich the grammar-school course with the essentials for intelligent citizenship. Emphasis is laid upon the avoidance of puzzles in arithmetic and upon the omission of useless details in geography.

The number of academic studies has been reduced from 75 to 61, as scheduled in former editions, and raised from 61 to

74 by the addition of the commercial branches, manual training, and Spanish. A special syllabus has been issued for the work in manual training, and another for the commercial work.

The following tables are the three most important summaries contained in the 224 pages of the new syllabus, and will be most frequently consulted:

REGENTS' SYSTEM OF EXAMINATION

ACADEMIC STUDIES.— The table assumes that each student takes three studies each day for five days each week. The term "count" represents ten weeks' work in one of these studies. The figure prefixed to each subject shows how many counts are allowed that subject. To obtain a regents' diploma it is necessary that the preliminaries be passed, and 48 academic counts including 8 English, 6 mathematics, 6 science, and 6 history. The preliminaries are: Reading, writing, spelling, arithmetic, grammar, and geography.

GROUP I.—LANGUAGE AND LITERATURE

ENGLISH[1]	MODERN FOREIGN
4 English, first year *or*	4 German, first year.
2 Advanced English and	4 German, second year.
2 English composition.	4 German, third year.
4 English, second year *or*	4 French, first year.
2 Rhetoric and	4 French, second year.
2 American selections.	4 French, third year.
4 English, third year *or*	4 Spanish, first year.
2 Advanced English composition and	4 Spanish, second year.
2 English selections.	4 Spanish, third year.
4 English reading *or*	ANCIENT
4 History of literature.	4 Latin, first year.[2]
2 Business English.[4]	4 Latin, second year.[3]
	4 Caesar's Commentaries.

[1] No extra counts will be given to those who pass both in English, first year and advanced English and English composition; English, second year and rhetoric; English, third year and advanced English composition.

[2] In first year Latin and Greek, candidates may take the separate examination or defer it and receive eight counts each for passing Caesar and Anabasis examinations, which include the work of the first year.

[3] Latin, second year, is offered as a substitute for Caesar, and Greek, second year, as a substitute for Anabasis; Latin, third year, and Greek, third year, are essentially sight translations.

[4] The special subjects for state business credentials may be credited toward academic credentials; advanced bookkeeping, commercial law, business English, business arithmetic, business practice and office methods, commercial geography and history of commerce, typewriting and business writing.

GROUP 1.—LANGUAGE AND LITERATURE—*continued*

4	Latin, third year.[3]	4	Greek, first year.[2]
2	Sallust's Catiline.	4	Greek, second year.[3]
2	Cicero's Orations.	4	Xenophon's Anabasis.
4	Virgil's Aeneid.	2	Homer's Iliad.
1	Virgil's Eclogues.	4	Greek, third year.[3]
1	Latin composition.	1	Greek composition.

GROUP 2.—MATHEMATICS

2	Advanced arithmetic.	2	Solid geometry.
4	Algebra.	2	Trigonometry.
2	Advanced algebra.	2	Business arithmetic.[1]
4	Plane geometry.		

GROUP 3.—SCIENCE

	PHYSICAL		BIOLOGIC
2	Astronomy.		
4	Physics.	2	Botany.
4	Chemistry.	2	Zoölogy.
		2	Physiology and hygiene.
	GEOLOGIC		
2	Physical geography.		
2	Geology.		

GROUP 4.—HISTORY AND SOCIAL SCIENCE

2	Elementary U. S. history and civics.	2	Advanced U. S. history.
		2	Civics.
2	Greek history.	2	Economics.
2	Roman history.	2	Commercial geography.[1]
2	Medieval history.	2	Commercial Law.[1]
2	English history.	1	History of commerce.[1]

GROUP 5.—OTHER STUDIES.

2	Stenography, 50 words per minute.	2	Advanced bookkeeping.
1	Stenography, 100 words per minute.	2	Business practice, etc.
1	Stenography, 125 words per minute.	1	Business writing.
2	First year home science.	2	Typewriting.
2	Second year home science.		FORM-STUDY AND DRAWING.
2	First year shop work.		
2	Second year shop work.	2	Drawing.
2	Bookkeeping.	2	Advanced drawing.

[1] No extra counts will be given to those who pass both in English, first year and advanced English and English composition; English, second year and rhetoric; English, third year and advanced English composition.

[2] In first year Latin and Greek, candidates may take the separate examination or defer it and receive eight counts each for passing Caesar and Anabasis examinations, which include the work of the first year.

[3] Latin, second year is offered as a substitute for Caesar, and Greek, second year, as a substitute for Anabasis; Latin, third year, and Greek, third year, are essentially sight translations.

Regents' credentials.—Certificates are in black type and are given for an attainment of 75 per cent. in a regents' examination in the studies printed after each.

1. *Passcard.*—Any study.
2. *Preliminary (preacademic) certificate.*—Reading, writing, spelling, elementary English, arithmetic, geography.
3. *Medical student certificate.*—All matriculates after January 1, 1897, must secure 48 academic counts.
4. *Law student certificate.*—Advanced English, English composition, first year Latin, arithmetic, algebra, geometry, English history, United States history, civics, economics, or any 36 academic counts.
5. *Dental student certificate.*—Any 36 academic counts or their equivalents (for matriculates before January 1, 1901).
6. *Veterinary student certificate.*—Any 24 academic counts or their equivalents (for matriculates before January 1, 1901).
7. *Academic certificates.*—All preliminaries and the subjects specified for the first year certificate; all preliminaries and any 24, 36, 48, 60, etc., counts, if one sixth of these counts are in English.[1]
8. *Academic diploma.*—All preliminaries and any 48 counts, if not less than eight are in English[1] and not less than six each from the second, third and fourth groups.

Classical academic diploma.—This credential will be issued on request to such students as meet the requirements for an academic diploma and have credit for the required classical studies. The required classical students are as follows: first year Latin, Caesar, or second year Latin, Cicero, Virgil, Latin composition, first year Greek, Xenophon or second year Greek, *Iliad*, Greek composition, Greek history, Roman history.

Advanced diplomas.—This single diploma provides for all academic courses longer than the regular 48 count course covered by the academic diploma above. It is issued only to those who have earned the regular 48 count diploma and 12, 24 or 36, etc., counts in addition.

The number of counts that each subject represents is given in the table of groups. For 24 counts a two-year certificate will be issued, and for 36, 48, etc., counts, a three, four, etc., year certificate will be issued. A new certificate will be given when 12 additional counts which represent a full year's work are earned.

First year certificate.—No certificate is issued for 12 counts unless it includes the preliminaries and first year English[1] (*or* English composition and two other English counts).

[1] Any foreign language may be substituted for English, but the papers of all students who claim this privilege will be revised carefully for English.

PROGRAM OF EXAMINATIONS

JANUARY AND JUNE

MONDAY 9:15 A.M.–12:15 P.M.	TUESDAY 9:15 A.M.–12:15 P.M.	WEDNESDAY 9:15 A.M.–12:15 P.M.	THURSDAY 9:15 A.M.–12:15 P.M.	FRIDAY 9:15 A.M.–12:15 P.M.
German, 2d year French, 2d year Virgil's Eclogues Adv. arithmetic Algebra Adv. drawing Latin composition	English, 2d year Rhetoric Amer. selections German, 1st year Latin, 1st year Adv. algebra Greek history Adv. bookkeeping	Greek comp. Plane geometry Physics Chemistry U. S. history and civics Commercial law	Sallust Greek, 1st year Arithmetic Trigonometry Adv. U. S. history Stenography Commercial geog. Typewriting	Writing Elem. English Cicero Medieval history Business English
1:15–4:15 P.M.	1:15–4:15 P.M.	1:15–4:15 P.M.	1:15–4:15 P.M.	1:15–4:15 P.M.
Adv. English English, 1st year German, 3d year French, 1st year French, 3d year English comp. Roman history	Caesar Latin, 2d year Virgil's Aeneid Latin, 3d year Xenophon's Anab. Greek, 2d year Botany Spanish, 1st year Spanish 3d year Business arith.	English, 3d year English selection Adv. Eng. comp. Phys. and hygiene Zoölogy Economics Bookkeeping Business practice	Greek, 3d year Homer's Iliad Geography Phys. geography Astronomy English history Civics Spanish, 2d year History of commerce	Spelling English reading Hist. of literature Solid geometry Geology Drawing Business writing Reading

Two parallel four-year courses are offered in English. These courses are so arranged that schools desiring full year courses in literature may take one line of work while those whose local conditions require them to follow a different line of work may take the half year courses. Throughout the four years the courses are so arranged that students may pass from one to the other without loss.

A three-year course in Spanish has been added to the modern foreign languages. This addition was made to meet the demand growing out of our newly established commercial relations in Cuba, Porto Rico, and the Philippines. The courses in German, French and Spanish are designed to require as much and as careful work as is given to three years study of Latin.

Instead of giving two short 10-week courses in Trigonometry, one of twenty weeks is offered. A twenty-weeks course in business arithmetic is also offered. No other changes were made in the mathematical group of studies.

Continuous courses of one year are offered in physics and chemistry. An attempt has been made to meet the demand for longer courses in these subjects than has been heretofore given.

At the same time by giving an examination both in January and June those schools that are unable to provide adequate equipment for a year's course are not barred from doing the one half year work. It is hoped that this change will be an inducement to teach more of one science and not attempt so large a variety. The syllabus advises that a twenty-weeks course in physical geography be offered and when practical that it be followed by a twenty-weeks course in geology, thus giving a year to the earth sciences. For the first time notebooks will form a prominent feature of the examinations. These will be noted by the state inspector of his regular visits. The principal will certify that they have been properly kept and will hold himself in readiness to forward upon demand these notebooks to the regents' office for inspection. In botany special emphasis is laid upon the study of the life process of plants. In physiology stress is laid on the cell theory and upon the digestive processes. Attention is called to the different kinds of foods and their relative digestibility and the simple experiments illustrating physiologic phenomena.

The history group came in for a considerable share of revision. Under existing conditions more credit could be obtained from a single year's work in history by one half than in any other department. There were plenty of instances on record where the student of general history devoting only the time allotted for that subject, had not only passed his general history but had also passed and received full credit for Greek, Roman and French history while New York state history was passed in an astonishing number of instances with barely one week's study. The problem, then, in the revision of the history syllabus was, how to arrange a course that would be satisfactory and complete and avoid existing pitfalls. The result of the discussion was general history, French history, New York state history and the reading courses in United States history were dropped. The outline in United States history simplified enlarging the requirements for biographic reading and adding the elements of civil government. In place of general history has been inserted Medieval; Greek and Roman history together

form a full year course. Medieval and English history also form a year course, and advanced American history and civics, including national finance and the principles of economics, form a third year.

Possibly the most radical changes in the arrangement of studies is found in the last group. This has been brought about by the addition of courses of manual training and commerce. Heretofore comparatively few schools have attempted manual training. It is hoped that the recognition of the work by the the state will encourage this branch of education. While a large number of schools have had a so-called commercial course, yet they have been in most instances but mere smatterings of bookkeeping and a few other branches, making it necessary for that student who wanted a more thorough business education to go to a commercial school. It was difficult to ascertain the reason why high schools should continue to prepare students for commercial schools. The present syllabus makes it possible for all schools who are able to support a four years' commercial course to do so and receive the state business diploma, the highest business credential given in the state.

The syllabus in drawing has been entirely revised and modernized. Plates selected for study as appeared in the 1895 revision have been omitted. Standard works covering the whole field are recommended as a part of the equipment for drawing in secondary schools.

There has been no change made in the names of the credentials to be given, but any foreign language may be substituted for English in any credential. This removes the heretofore existing handicap of the student who elected the old or new classical course. This change does not prevent the classical student from studying English. It simply does not require him to do so in order to graduate. The assumption being that in a four-years' secondary course if seven twelfths of the time is to be given up to the study of foreign languages that of the remaining five twelfths, three of them should not be positively prescribed for further language study. The quarrel, if any exists, is with those who insist upon spending upon Latin and Greek, 1400 of the

2400 hours of a secondary course, or else it lies at the door of those who prevent the beginning of a foreign language in the eighth year.

The daily program has been materially changed placing the eleventh and twelfth subjects, or the junior and senior years of the high school, in the forepart of the week, the preliminaries, first and second year high-school subjects in the later part. This change is made in order that students who expect to graduate and in those localities where graduation depend upon passing the state examination, may know as early as possible the result of their work.

The special topic plan is discontinued, and last, but by no means least, grants of public money will hereafter be made upon the basis of academic attendance.

September 1 saw the new syllabus in force. Its success can only be determined after it has passed through the crucible of the class room.

F. D. Boynton,
Chairman Committee from Academic Principals
Ithaca High School

WHERE THE BEST ENGLISH IS SPOKEN

THE construction of the English language, that is the English language as it is written, has not changed much during the last two hundred years, in fact very little for three hundred years. To be sure there has been a change in the spelling of words, many words have become obsolete, and many new ones have been added, but the general arrangement of the English sentence has not undergone any material change since the settlements of Jamestown and Plymouth. I fancy, however, that if the manner of inflection, the pronunciation, the spoken English of the Englishmen who lived three centuries ago could be arrived at, it would sound odd indeed. If the New Englander of today could hear the voices of Winthrop, Roger Williams, and Cotton Mather, I doubt if they would have the Bostonian sound. Nor do I think the spoken English of John Smith's time would have much resemblance to that spoken today by the first families of Virginia. For that matter the pronunciation of John Adams and Josiah Quincy, of George Washington and Thomas Jefferson must have been very different from that of the present Bostonian or Virginian.

Before the introduction of the printing press, and a general diffusion of literature, it seems that the written English adjusted itself from time to time to correspond with the ever-changing spoken English, but with the literature of Shakespeare and Bacon and Milton came the printing press, and the works of Addison and Swift a century later showed some changes, but now for two centuries the "Spectator" and the "Tale of the Tub" have been standards of good English. One would think that with the good English given us by the prose writers of the sixteenth and seventeenth centuries which has been so universally accepted by the English speaking people ever since, with Johnson's dictionary given to us at the same time, that there should not have been much change in spoken English, but that we ought rather to have gotten together in accordance with the standards. Such,

however, is not the history of the language. Dialects, not in the technical sense, but as the term is popularly used, have thriven both in England and America. Dr. Emerson in his *History of the English Language* says that "In Britain alone there are six important dialect divisions, without including Wales or the Highlands of Scotland." The dialect divisions given are the southern, the midland, the eastern, the western, the northern, and the lowland of Scotland. As to England proper a more general classification would be the southern, included within the counties bordering on the southern coast, the midland, included within the counties lying north of the Thames, perhaps to the latitude of Birmingham, embracing London and the universities of Oxford and Cambridge, and the northern, including all counties lying north to Scotland.

In the extreme southern portion of England the initial h is usually pronounced, and the letter has its usual sound. Vowels are not drawled as in North England or Scotland. The letter f is usually pronounced as v, and s as z. A good example of extreme South England's spoken language is the poetry of Barns written in the Dorset dialect.

The North England very much resembles the Scotch. All classes trill the letter r, especially where it precedes a vowel sound. Many vowels are drawled, or given a double sound. As neow for now, bean for been, maake for make, and the like. The initial h is generally dropped, especially by the peasantry.

Perhaps the best English spoken in England is the language of that section lying north and east from Oxford and London. Here are the great universities of Oxford and Cambridge, and here have lived most of England's literary men. Even in this part of England it is only the cultured classes who have not the h difficulty. The initial h is not only dropped, but more frequently than elsewhere in England the aspirant is prefixed where it should be omitted. Although the difficulty in the pronunciation of the aspirant does not extend to the cultured classes, unless perhaps occasionally in such words as which and what, nevertheless many educated persons in and about Cambridge and Oxford have fallen into errors quite as bad. For

example, they do not give the letter r a uniform sound, and many educated men of society, and unfortunately they are growing in number, have disgraced the Queen's English with their "deont you kneow." It is in this part of England, however, that the correct broad vowel sounds of the language are best preserved. It is in this part of England that the American traveler finds the nearest approach to the speech this side of the Atlantic.

In the popular sense of the term "dialect," there are in the United States not fewer than three distinct dialect divisions, the New England, the southern, and the western. There might be added the mountain dialect of the mountain country of the Virginias, Kentucky, Tennessee, and North Carolina, the Cracker of Georgia, and the Creole of Louisiana. The dialects of the mountain people, the Crackers, and the Creoles are dialects of uneducated people, while the dialects of New England, the South, and West appear in the spoken English of the cultured.

Among the uncultured classes of New England the drawl or double sounding of some vowels is one of the most noticeable peculiarities. For example, the untutored New Englander says ceow, neow, cean, ceandidate, and the like. We find here some similarity to the dialects of North Britain; but not so much as is supposed before investigation. The New England dialect as spoken by its uncultured is well illustrated by the "Bigelow Papers," though the drawling of vowel sounds is not spelled into the words. This is perhaps due to the fact that at the time Lowell wrote the papers this peculiarity was almost as common among the educated as the uneducated, and Lowell was either unconscious of the peculiarity, or thought it unnecessary to spell into words their ordinary pronunciation.

Among the cultured classes of New England the error of drawling vowel sounds has been partially corrected, but they have fallen into another error equally as bad in the misuse of the consonant r. The r difficulty is much more noticeable in New England than in any part of Britain. The New England scholar persists in saying wuhd, wuhk, wuhld; and the final r, in words like or, far, jar, tar, her, fir, and the like, is never sounded, but a

sound akin to ah is given instead. This is not because of any physical difficulty, because they just as persistently add the final r where it does not belong. Our educated Bostonians say idear, Philadelphiar, Uticar, Saratogar, and so on. It is not because they do not know any better, for they more than others are responsible for our dictionaries which forbid it. The New England dialect is heard in New York, Michigan, Wisconsin, and Minnesota, though less frequently the farther west we go.

The dialect of the South, that is the old slaveholding territory, is in some respects similar to that of New England. The South has the r difficulty more pronounced, if possible, than the people of Massachusetts, and the difficulty is to be found among all classes, the cultured, the uneducated whites, and the negroes. All say doah, floah, moah, roah, etc. And the Southern man, like the man from Cape Cod, adds a final r to words ending in a vowel sound. Another peculiarity in the Southern speech is stopping short of the g in all words ending in ing. The Southern man says doin, sayin, goin. Again the words ending in en, as broken, spoken, token, and the like, are quite frequently pronounced as if the e in the last syllable were i, thus brokin, spokin, tokin.

The Western dialect is generally spoken in that portion of our country lying north of Mason and Dixon's line, and west of the Alleghanies to the Pacific, except in localities in the northern portion in the New England latitude. In this part of the United States the cultured and uncultured are entirely free from the r difficulty so noticeable in the East and South, except that it is affected by a few. The people of the West are also free from the drawling of certain vowel sounds so common in New England. The Hoosier never says "pail the ceow." Nor is the dropping of the g in words ending in ing so common among the educated people of the West as it is either in the East or South. They are, however, more likely to err in the pronunciation of some of the vowel sounds than are their New England cousins. Too frequently the Western man says institootion, constitootion, and the like. Another vowel sound which is usually mispronounced in the West, even by many educated people, is the

Italian sound of the letter a, as in such words as class, pass, laugh; also the short sound of the letter o in such words as dog, log, and hog is by the Western man usually given the longer sound, and the words are pronounced dawg, lawg, and hawg. The dialect of the uncultured of the West is well illustrated by the poetry of Mr. Riley. It is well that Mr. Riley has preserved for future generations what is known as the Hoosier dialect, but which was in fact the dialect of the unlettered throughout the whole western section of our country.

After this specific reference to the various dialect divisions of spoken English both in England and the United States, we may note some of the general differences in the spoken language of the two countries.

It does not take very close observation to detect from his inflection and pronunciation whether one is a native of England or America. Generally speaking the Englishman has less of the nasal tone than the American. The Englishman puts greater stress upon the first syllables; he generally speaks in a higher key; his vowel sounds are usually broader. The Englishmen have fallen into the one error little known in this country, that is the h difficulty. This, as we have said, does not apply to the educated Englishman. It is said that at least two thirds of the people in Britain do not pronounce the initial h. The almost total absence of this defect in American English is perhaps due to the fact that the error grew up since the English settlements were made on this side of the Atlantic. Some have sought to account for it on the theory that languages as they grow older lose the h sound. But, if this is the correct reason, why has not the language been affected the same in America as in England? The history of languages does not justify the statement that a language by age loses the h sound. Even in Greek, where there is no letter representing the aspirant, the sound is preserved, and in the written language the breathing is as important as a letter. Just what caused the h error in England cannot perhaps be actually known; it is possibly due to French influence, for the initial h in the French language is not usually pronounced; but it seems certain that this trouble with the English aspirant

has grown up during the last two hundred years. It is only within the last century that the misuse of the letter h has been a subject of ridicule by English critics and men of letters.

The misuse of the letter r which is as grossly incorrect as the h difficulty is perhaps more general in England than in America, although as stated above, in speaking specially of the Southern dialect, it is most noticeable in the southern part of the United States. No lexicographer, so far as I have been able to learn, has ever credited the consonant with but the ordinary and usual r sound. We search in vain through the volumes of poetry written in standard English during the last three centuries to find a single instance where the rhyme or rhythm reveals a second or broken sound of the letter r. Even our recent New England poets, Whittier, Longfellow, and Lowell, who no doubt in their conversation had not overcome the error, never make idea rhyme with fear, nor do they rhyme Noah with door. Just why or when the r difficulty fastened itself upon the speech of so many Englishmen is not known, but I believe in comparatively recent times. The singular feature is that the error is not that alone of the uncultured, but of the educated as well. We find it in the speech of the Harvard or Oxford professor, the farmer of New England, the professional man, the planter, the mountaineer, and the colored man of the South. Some phonologists seek to account for the r difficulty as they have sought to account for the difficulty with the aspirant, by asserting that it has grown up in accordance with a law of philology that the guttural weakens, and the final r disappears as a language grows older. The trouble with this argument is that comparative philology does not seem to reveal any such law; but if it did there would still be unaccounted for the adding of the r where it does not belong, as when our London or Boston friends speak of Indianar. Others have urged that the improper pronunciation of the letter r is due to the influence of the colored race. Now if the difficulty were confined to the southern part of the United States this theory would be plausible, but the improper pronunciation of the letter r is found not only in the South, but in New England and in London. Again it has been asserted that the peculiarity is

wholly due to climatic influences; that the tendency in southern climates is to discard all harsh or guttural sounds; but London is not a southern climate, neither is Maine. So we must conclude as we did in reference to the h difficulty, that we do not certainly know.

The fact that the Puritans who settled New England came largely from North England, and that Virginia settlements were made up of people from London and vicinity may account for the primary differences between the New England and Southern dialects. Negro slavery perhaps had more to do with the development of the southern dialect than anything else. The prejudices engendered on account of slavery kept New England literature out of the South. The South had no literature, but adhered to the English standards. As a result there are in the Southern dialect few of the distinctive Americanisms.

The middle West was settled mostly by immigrants from New England, Pennsylvania, Virginia, and North Carolina, and the settlements of the farther West country were dominated in turn by the middle West. How must we account for the development of the Western dialect? Undoubtedly the Germans from Pennsylvania had some influence, but I doubt if as much as some would credit them. One hundred years ago when Ohio, Indiana, and Illinois were settled by immigrants from New England, Pennsylvania, Virginia, and North Carolina, I fancy that the language of those settlers was not so very different from the language spoken by the same classes of people in the West today; that the changes in the spoken English during the last century have not been so much, certainly not more, in the West than in Boston and Richmond; else how can we account for the total absence of the r difficulty in the Western section. If all settlers from New England and Virginia pronounced such words as ford and floor as if spelled foahd, floah, why have their descendants not retained vestiges of this pronunciation somewhere? I believe the early settlers of the middle West came pronouncing the guttural very much as it is pronounced by the Western people today; that, separated from their former homes by the mountains, there was necessarily in those days very little

communication. The people were poor, and the school teachers were for the most part uncultured. English Grammar was neglected. Later when the study of English was taken up in the schools, the crude English spoken was not taken as the standard of pronunciation, but everything was referred to Webster's dictionary; and as the schools developed the pronunciation grew closer and closer to the standard, until today, as compared with the standards, the best English is spoken by the educated people of the middle West, perhaps in Indiana.

With the increased and increasing facilities for travel, with the good feeling between Great Britain and the United States, there will of necessity follow greater uniformity in the spoken language of all English speaking peoples. When this greater uniformity in spoken English comes, and when later the changes show themselves in the written language, shall it be that the strong rugged guttural of the Anglo Saxon shall have given way to the effeminate, and less forceful sound, or shall spoken English grow towards the standards of written English? The tendency in the West is towards the standards, the tendency in New England and in the South and in London is away from the standards. The best weapon with which to fight the errors of a spoken language is ridicule. Dickens spelled into the speech of Uriah Heap and many other characters the misuse of the aspirant, and the letter is slowly coming back into the speech of the people of London. The whole English speaking world has laughed at the homely dialect of the Hoosier, and the Hoosier is correcting his mistakes. Now if some courageous men of letters would turn their attention to the wuhds, wuhks, idears, Philadelphiars, the Saratogars, of our cousins who are in error, I believe good results would come. A living language must necessarily change, but it should be the desire of those who love our language that the changes may not be at the expense of its Anglo Saxon strength.

CHARLES F. REMY

INDIANAPOLIS

WASTE IN HIGH-SCHOOL EDUCATION[1]

In spite of the extraordinary advance during the last few years in all that pertains to secondary education, it is undeniable that less is still accomplished than might be accomplished with the same expenditure of time and effort. In other words, there is still waste in high-school education.

Four aspects or modes of waste may be distinguished: (1) method or manner of teaching; (2) matter; (3) order of presentation; (4) aim or purpose.

The waste in method of instruction is the most obvious and widely discussed, yet every teacher knows that it is still widely prevalent. Some teachers use too many books, others too few. Some make too much use of the memory, others too little. Some talk too seldom themselves, others talk altogether too much. Time would fail for even an enumeration of the defects in instruction leading to waste in education. But there is one point, seldom mentioned, which nevertheless in my opinion deserves special attention. I refer to the radical difference in method between the eighth and ninth grades. Up to that point the methods change but little and slowly, in the main not at all. The pupil studies and recites all his lessons in one room, to one teacher, with the same surroundings and the same classmates. The school therefore becomes a second home, and the intimate personal contact results in direct and fruitful influence of personality upon personality. But the moment he enters the high school all is changed, and the larger the school the greater is the change. The pupil is now lost in the multitude. He studies in a room whose occupants are constantly changing, he recites to four or five teachers whom he scarcely sees except in class, he goes from room to room, finding in each a multitude of new faces; in all this busy, hurrying throng of pupils and teachers there is seldom anyone to whom he feels free to unbosom

[1] A paper read before the Minnesota Educational Association.

himself, anyone who has a vital personal interest in him and to whom he feels a direct personal reponsibility. In a word, he is thrown entirely upon his own resources, without a word of warning or of preparation. Is it any wonder that the percentage of mortality, so to speak, in the first year of high school is alarmingly great? That boy spoke better than he knew who, on being asked why he did not get along better in high school, replied that he "couldn't get the hang of the schoolhouse." Could anything more pathetic be imagined? A system which through the lack of adjustment between grammar school and high school gives rise to such a condition of affairs is assuredly a prolific source of educational waste.

Matter and order of study together constitute the question of "course of study," which has of late years been the subject of such extended and fruitful discussion. Here again time would be lacking merely to name the ways in which waste occurs through the irrational choice of subjects and the illogical and unpedagogical order of treatment. Almost any course of study, even the best, would offer examples to the point. Hitherto, one of the chief causes of this condition has been the fearful and wonderful variety of entrance requirements which the colleges have maintained and sought to impose on the schools. To all appearances, it has been a race between them to see which could invent the most impossible set of requirements; the winner in this contest being esteemed the most advanced and exclusive institution. But the agitation for uniform college entrance requirements is proof that the greatness of the resulting evil is working its own cure; and the high schools may now hope for the gradual removal of the obstructions which the colleges have offered to the formation of a rational high-school curriculum. The University of Minnesota is to be congratulated on having taken, in the recent revision of its requirements, the longest step in this direction which has yet been made by any American university, excepting only Harvard. In at least one respect, however, I believe there is still room for improvement. I am one of those who believe that the retention as an absolute requirement of the so-called "higher algebra," which in practice

is very seldom anything of the sort, costs a great deal more in derangement of the curriculum than it is worth.

But the main responsibility for the waste resulting from unwise choice of matter and order must nevertheless be borne by the high schools. Comforting as it would be, it cannot be shifted to the colleges. The force of tradition is mighty, human inertia is great; it is so much easier to copy thoughtlessly some previous course, with trifling changes in details to suit local conditions or individual fancy, than to make a new course on some rational plan. And the confusion always resulting where some rank educational empiric has illustrated anew the ancient proverb about fools and angels, has tended to confirm the majority in the conviction that the beaten track is the way of safety. Thus conditions have, on the whole, changed very slowly and not always for the better. When high schools were first established there was one course for all alike: to this bed of Procrustes all must be fitted, at whatever sacrifice of their natural abilities. Later the pendulum swung to the other extreme, and courses multiplied until it seemed that high schools prided themselves as much on the number and peculiarity of their courses as the colleges on their entrance requirements. In both cases the pride felt in such matters appeared to vary in inverse ratio to the size of the school. Instances have been known of a school of less than two hundred pupils maintaining from six to twenty different courses; and it is believed that such schools still exist, though of course not in Minnesota.

The waste resulting from such an arrangement is only less—if indeed it be less—than that resulting from the single ironclad course. Of all the forms of educational waste, all teachers will surely agree that the most harassing and hopeless is that of trying to pound subjects into the heads of pupils who can never in this world be brought to comprehend them. Is it not so? Yet wherein does the multiple course system offer any relief? The true remedy is not optional courses, but optional studies. The introduction of a single general course, with a few studies required and the rest optional may, in my opinion, be justified on the following grounds:

1. That an appeal to the assumed ability of school authorities to choose more wisely than the pupils logically requires the establishment of a single ironclad course for all pupils, an obvious *reductio ad absurdum.*

2. That the establishment of several inflexible courses, between which pupils are to choose, once for all, abandons completely the theory of benevolent despotism, and substitutes the optional principle in its most injurious and indefensible form; in that, namely, in which the youth of the pupil and the irrevocable nature of the dicision combine to produce the maximum number of fatal mistakes, and consequently of ruined careers.

3. That the attempt to escape these consequences by allowing a change of course and the substitution of studies, as now generally practiced, leads to a condition of utter chaos; and that this result cannot be avoided so long as the value-in-exchange of the several studies, and the selection of those which are indispensable, depend upon nothing more permanent or tangible than the private opinion of the temporary principal.

4. That the only way of insuring that each graduate, and each pupil, so far as he goes, shall have taken a consistent, well rounded course, is therefore to authorize, and at the same time to limit, the substitution of studies on a definite credit basis, in such a manner that whatever choice the pupil makes, he cannot construct for himself a scrappy, unrelated course.

Finally, it is obvious that both the manner and matter of education are largely determined by the aim; and in the predominant aim of education today is involved a waste greater than all the other aspects combined. The schools, the last refuge of discredited philosophies, are still dominated by the extreme individualism of the last century, which regarded the individual as the center of the universe and the object and end of creation. This philosophy has been weighed in the balance and found wanting long years ago in all other departments of thought. In economics and politics the *laissez faire* theory has long since passed to the limbo of doctrinaire inventions. Depravity in the home, dishonesty in business, corruption in politics, are all a most impressive warning that the individual

has been petted and pampered until he feels no sense of obligation to God or man. Public spirited citizens are moved to form civic leagues to combat the reign of unbridled selfishness. And yet in the face of all this the schools go on educating youth with a view not to the good of society, but to the advantage of the individual. Schools cannot be rightfully maintained out of public taxation merely to give an additional start in life to those already endowed by nature with exceptional advantages. We need to hear less of the rights of the individual and more of his duties, less of individual liberty and more of social solidarity. As Fouillée has pointed out: "The danger that, above all others, a democratic nation must avoid is the disintegration of society into units with no immediate concern but self-interest, into individuals to whom social duties and bonds are gradually ceasing to appeal." Aristotle assures us that "man is by nature a social animal;" and a greater than Aristotle has taught that "we are all members one of another," and that "none of us liveth unto himself;" shall we not at last cease to go contrary to this primary truth in our education? If this most fundamental and disastrous waste in education is to end, there must be more emphasis on the social sciences throughout the schools, and especially in the high school; an emphasis which shall appear not only, nor chiefly, in the introduction of new subjects, but in the handling of all subjects with reference to their bearing on social welfare. The imperative need of the age is the *socialization of education.*

EDWARD VAN DYKE ROBINSON

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BOOK REVIEWS

AN INTERNATIONAL PRIMER-CYCLOPEDIA

Introduction to Natural Science, by ALEX. HILL, Downing College, Cambridge; *A History of the English Church*, by the Very Rev. H. D. M. SPENCE, Dean of Gloucester; *A History of Politics*, by EDWARD JENKS, M.A.; *Ethnology*, Translated from the German of Dr. Michael Haberlandt, by J. H. LOEWE; *Roman History*, Translated from the German of Dr. Louis Koch, by LIONEL D. BARNETT, M.A.; *The Civilization of India*, by ROMESH C. DUTT, C.I.E.; *Dante*, by EDMUND G. GARDNER, M.A.; *History of Language*, by HENRY SWEET, M.A. Each volume is 6 × 4 inches in size, has 60 pages, and costs 40 cents. The Macmillan Company, New York.

A VERY serious problem in connection with secondary-school work is the selection of suitable books for a reference library. We usually begin with a dictionary and a cyclopedia and think that these form a very respectable nucleus. But an examination of school libraries and actual teaching experience with a class in literature, for example, will show one how little the cyclopedia is used and with what difficulty the teacher persuades the children to read carefully what is said on the subject in the cyclopedia. The children will give good reasons for not consulting it. They say that but one student can get at it at a time, that it is bulky and difficult to handle conveniently, and that the information is too often not interesting. Then, again, there are so many other articles or pictures to attract the attention. Some such reasons must have come to the publishers of this series to move them to the publication of these very attractive books (within and without). They treat of such subjects as come well within the scope of secondary education, they are written by men of ripe scholarship and of recognized position in their several fields of labor, they are attractively printed and bound, and are published at a price that makes possible not only the possession by the schooi of duplicate copies in the library, but, better still, the ownership of a number of them by individual members of the class. It is not alone information that we wish the child to find, otherwise a cyclopedia would avail, but it seems to me that if he can obtain the information by reading a work composed in an attractive style we are nearer the accomplishment of what we mean by educating a child.

The publishers have issued a circular describing the whole series and announcing a large number of volumes in press and in preparation.

A History of English Literature. By F. V. N. PAINTER. Sibley & Ducker, 1899. 8vo, pp. 697.

IN his *History of English Literature* Professor Painter insists that in the reaction from mere catalogues of authors and their works we have neglected the study of

English literature in its entirety, we have given ourselves up to the study of individual authors and even of single productions, and often forget to study their relations to each other or to their times. A little experience as a student with the catalogue method, and as a teacher with the work of individual authors, has led the writer of this notice to agree fully with Mr. Painter. Those of us who teach mainly by the study of individual authors do not always realize that our freshmen, and even our seniors, are almost entirely ignorant of the general course of our literature, and even of some of its great names. If you ask a class for the names of twelve or fifteen of our greatest writers and their approximate dates, you will be surprised at the ignorance displayed.

Not all of the remedies for this trouble are worth while. For instance, a brief sketchy introduction to English literature, or even to its fiction, on which the class spends only a week or two, is practically a waste of time. The facts must have a chance to soak in, for familiarity comes only with time.

Mr. Painter's book has two or three distinctly good qualities. He has picked out thirty odd writers about whom he talks in detail. The rest he subordinates to a few lines, which give little more than dates and titles. He thus keeps a very fair prospective, and helps students to discriminate between merely interesting writers and important ones.

The book is not meant to be taken by itself, but is to guide and supplement the reading of particular texts, so it contains no selections at all. Its use will save time in class, for the teacher may assign lessons in it instead of trying to supply the information verbally.

Perhaps the most attractive feature of the book, and a very important one, is the series of carefully chosen and splendidly printed portraits. Those of Swift, Johnson, Cowper, and Macaulay are especially illuminating, and those of the Victorian writers are mostly taken from now famous paintings.

EDWARD P. MORTON

UNIVERSITY OF INDIANA

SOME RECENT FRENCH BOOKS

Contes Bleus. Par ÉDOUARD LABOULAGE. Edited by C. Fontaine, High School, Washington, D. C. Pp. 148. Price 40 cents. Boston: D. C. Heath & Co.

Contes et Saynètes. Edited by T. F. Colin, Miss Baldwin's Preparatory School, Bryn Mawr, Pa. Pp. 160. Price 65 cents. Boston: Ginn & Company.

Les Fautes de Langage, ou le Français comme on le parle. Par VICTOR F. BERNARD. W. R. Jenkins, New York.

Contes Bleus is a charming little book of fairy tales suited to beginners. The stories are simple in language and very attractive in material. It is an admirable book for first French readings.

Contes et Saynètes is a welcome addition to our stock of readers. This book contains selections from modern authors and prepares the student for a further and

more intimate acquaintance with them. This book should find a place for itself. It is exceedingly neat and attractive in appearance.

Les Fautes de Langage is a valuable book for Americans. It explains difficulties that they meet every day, and the book is admirable in its purpose. I wish it contained more material. I can gladly say that this book *est "digne de la faveur des élèves et des suffrages des professeurs."*

H. P. WILLIAMSON

THE UNIVERSITY OF CHICAGO

EDITORIAL NOTES

GEORGE HERBERT LOCKE

THE question of accrediting High Schools will be one of the main points of an article by President Jesse, of the University of Missouri, on "The Influence of the State University on the Public Schools." This will appear in our October number, and Dr. Oscar Thiergen, of Dresden, Germany, will write on "The Teaching of English in the German Reform School." Professor William Morris Davis, of Harvard University, will conclude his article on "Physical Geography in the High School." Miss Begle's paper on "Caesar's Account of the Animals in the Hercynian Forest" will be of special interest to teachers of Latin.

MR. J. H. MILLER, formerly editor of the *Northwestern Monthly*, of Lincoln, Neb., has been recently appointed principal of the State Normal School at Cheney, Wash. Mr. Miller has already taken up his work and has transferred his publishing business to Ainsworth & Co. of this city, who will handle his list of books in the future.

THERE are many convincing proofs of the progress of interest in the education of women in England. It certainly is of interest to us to notice that the London School of Economics and Political Science offers three studentships for the encouragement of research, one of £100 a year for two years and two of £50 a year being confined in the first instance to women students.

EDUCATIONAL work in Indiana ought to be greatly benefited by the amalgamation of the *Inland Educator* and the *Indiana School Journal*. These were good journals, and we hope that the hyphenated result, the *Educator-Journal*, will combine the best of both. It will be under the editorial management of Mr. D. M. Geeting and Mr. W. W. Storms, with the office in Indianapolis.

THE *School Journal*, of New York, showed commendable enterprise and earned the gratitude of the many teachers who could not go to Charleston, by publishing in the issues of July 14 and July 21, an excellent summary of many important papers read at the meeting of the National Educational Association. The editing of the abstracts is well done, and these issues form an excellent preliminary report of the "Proceedings."

THE Commercial University of Leipzig will next year institute its first set of examinations under state control. Of these examinations there are two kinds. The first is for merchants who wish to qualify for the mercantile diploma; the other is for teachers in training to teach in commercial schools. The compulsory subjects include higher commercial arithmetic, bookkeeping, commercial correspondence and office work, political economy, finance,

commercial history and geography, and the law of commerce. There are optional examinations in foreign correspondence and technology. The examination for the teacher's diploma includes a test lesson at a commercial school and an examination in the principles and practice of teaching. It will be seen, therefore, that both the science of commerce and the science of teaching receive recognition.

THE *Journal of Education* of London, Eng., calls attention to an evil from which we are not entirely free in this country. There it is met with in the evening continuation schools, which are intended for the children who have not been able to finish their education in the day schools; here it frequently appears in evening classes in connection with various schools and social institutions and in extension courses of our universities. This evil consists in the issuing of a syllabus for the teaching of such a subject as English literature in which the subject is treated from the university standpoint and can mean but little to the class of people for which it is ostensibly intended. The example cited consists of such subjects as "The Celtic Fringe and its Bards," "Puritanism and Poetry," "Prose and Prosaic Poetry," "Late Developments of Romanticism," etc.

THE most unique contribution to the literature of "Exercises in False Syntax" is afforded by a reprint of the report of the superintendent of the city schools in Detroit, with elaborate critical footnotes explanatory of the mistakes made in the report, and suggestions for their correction. It is signed by "E. S. Sherrill, Inspector, Second Ward," who states that his object is to afford "incontrovertible proof of the unfitness of the superintendent for the position he is trying to fill." Nothing is too minute and trivial to escape his eagle eye, and one naturally wonders what motive actuated such an extraordinary performance. Our superintendents must watch very carefully the composition of their reports lest some person of a hypercritical turn examines into the omission of commas, the mixing of metaphors, faulty paragraphing, and needless repetitions.

THE California State Educational Commission of seventy-five members selected by Superintendent of Public Instruction Thos. J. Kirk, President Wheeler, of the University of California, and President Jordan, of Leland Stanford, submitted the following plan for the certification of teachers in the high schools of the state: "The state board of education shall name the credentials upon which persons may be certificated to teach in the high schools of this state. The credentials must be, in the judgment of said board, the equivalent of a diploma of graduation from the University of California, with a recommendation from the faculty thereof, for a teacher's certificate of high school grade. No graduate from said university shall be thus recommended who has not taken the minimum amount of pedagogy prescribed by the state board of education. Said board may also consider the cases of individual applicants, and in doing so may take cognizance of any adequate evidence of

preparation equivalent to that of recommended university graduates which the applicants may present."

THE French correspondent of the *London Journal of Education* sends this interesting bit of educational news:

It will be welcome news to not a few teachers of French that a government commission, with M. Gaston Paris for its president, is engaged in examining the anomalies of French grammar, with a view to reporting upon the possibility of introducing some simplification into the teaching of that subject in the primary and secondary schools. By way of stimulus to the commission, the educational press has been lately calling attention to some of the most obvious *desiderata*. We subjoin a short selection from the list: All plurals, including those of proper and foreign nouns, to end in *s; vingt* and *cent* to take *s* whenever multiplied; one noun one gender; one rule for concord of *nu, demi, feu, y compris, tout*, etc.; uniformity of conjugation for *appeler, modeler, jeter, acheter*, etc.; invariability of past participle with *avoir;* more uniformity in the use of capitals, hyphens, accents, and elision. There are those who are urging also that any reform of the grammar should be accompanied by a reform of the orthography; but there seem no signs that this will be the case. We shall await with much interest the report of the commission, and the subsequent action of the government, though our hopes have been raised too often before for us to be at all sanguine of relief.

THE number of teachers who go to Europe for recreation and to obtain a more intelligent appreciation of the life of those peoples whose histories, whose languages, and whose countries enter so much into the everyday life of the school, is rapidly increasing. The preparations usually take some little time, and guide books are carefully examined and advice of those who have been across the ocean is eagerly sought. But too often all these are unsatisfactory, and it is refreshing to find that a woman has at last come to the relief of her sisters, and in a very interesting manner Mary Cadwalader Jones writes a book called *European Travel for Women, Notes and Suggestions*. The preparations for the journey, the relative merits of guide-books and dictionaries, the important rules about bicycles, are treated in the first part of the book; England, France, Germany, and Italy are passed in review in a gossipy manner, not forgetting many shopping hints; then many useful phrases, explanations of terms used differently in America and England, and other such valuable information is given, the whole result being a very readable and useful book to those who contemplate a trip to Europe. The Macmillan Company publish it at $1.

WE have long looked upon the *inspector* of schools as a necessary part of the system or schools in England, and have explained to the visiting British educationist that we do not *inspect*, but rather *superintend*. But with the growth of the system of placing certain high schools upon the accredited lists of colleges and universities it has become necessary to inspect the work of these schools. Here a very serious problem confronts the faculty of the college, for a well-qualified inspector is a *rara avis*. This question we shall

open for discussion in this journal during the coming year, and we hope to have it dealt with from the standpoint of the high school as well as from that of the university. The feeling in England among larger secondary schools is becoming more friendly towards inspection, and in a discussion at the College of Preceptors, Dr. Scott outlined what he considered important facts of an inspector's work. In the course of his address he said: "There is perhaps hardly any word which has stood, and stands, for more apprehension, anxiety, and heartburning among teachers than the word *inspection*. Nor is this to be wondered at, for the term is so wide that only use and custom can narrow its application. To *inspect* is to look into, *i. e.*, for the purpose of reporting to proper authority; and *inspection*, as applied to schools may be taken to mean to look into any (or all) of the matters which relate, whether directly or indirectly, to teaching. Thus a complete inspection will, for the purpose of reporting to the proper authority, look into and estimate the efficiency of (*a*) the premises in which the teaching takes place; (*b*) the administrative conditions in which the teacher is placed; (*c*) the instruments through which the teaching is communicated to the learner; (*d*) the result of the teaching as evidenced in the pupil."

WE are reading much these days of the *theory* of elective studies in our high schools, and after these theories have been carefully discussed the question is often asked, "Is there any high school in which an elective system of studies is being tried?" As a partial answer to this question we are submitting the course of study in the high school at Medford, Mass., for the consideration of those who may be interested in a system that is now in operation. Mr. Morss, the superintendent of schools, and Mr. Dame, the principal of the high school, have kindly given their consent to its insertion in this Journal. We may add to the directions accompanying the course the explanation that Grade IX is the last year of the grammar school, and is included in the high-school course because of local conditions, there being a large new high-school building that can accommodate these pupils and relieve the crowded condition of the other school buildings. We may add also that *geology* in the course of study includes physical geography.

HIGH-SCHOOL COURSE OF STUDY

MEDFORD, MASS.

DIRECTIONS

1. Diplomas will be given to those pupils who have successfully completed courses in Grades X to XIII amounting to sixty (60) credits in the column marked "Diploma Value."

Portions of a year in a *one year* study will not be counted.

In studies continuing more than one year, courses of less than *two* years will not be counted. This includes only those followed by Roman numerals, as (Latin II.)

Grade IX	Prepared Exercises	Unprepared Exercises	Diploma Value	Grade X	Prepared Exercises	Unprepared Exercises	Diploma Value	Grade XI	Prepared Exercises	Unprepared Exercises	Diploma Value	Grade XII	Prepared Exercises	Unprepared Exercises	Diploma Value	Grade XIII	Prepared Exercises	Unprepared Exercises
Eng'ish	3	1	3	English	3	1	3	English	3	1	3	English	3	1	3	English	3	1
															4	English Composition	3	2
							2	English (college)	2	1	1	English (college)	1	1	3	English (college)	3	1
Latin I	4	1	4	Latin, II	4	1	4	Latin, III	4	1	3	Latin, IV	3	1	4	Latin, V	4	1
			4	Latin, I	4	1	4	Latin, II	4	1	4	Latin, III	4	1	3	Latin, IV	3	1
							4	Greek, I	4	1	4	Greek, II	4	1	4	Greek, III	4	1
			4	French, I	4	1	3	French, II	3	1	4	French, III	4	1	3	French, IV	3	1
											1	French, III (college)	1	1				
											4	German, I	4	1	4	German, II	4	1
Algebra	3	1	4	Algebra	3	2	4	Geometry	4	1	2	Algebra and Geometry } review	2		2	Geometry, solid	2	
			4	Geometry, concrete	4	1					2	Bookkeeping	2	2	2	Trigonometry	2	
History, United States	3		3	History, English	3		3	History, Ancient	3		3	History, Mediæval	3		4	History, American	3	2
															3	Civil Government	3	
											3	History, Greek	3		3	History, Roman	3	
															1	History of Art	1	
							3	Physics	2	3	4	Physics, advanced	2	3				
Laboratory practice		1									2	Physics, I (college)	1	2	3	Physics, II (college)	2	2
											3	Geology	2	2				
											2	(without field work)						
															3	Botany, advanced	2	2
			2	Botany	2	2	3	Zoölogy	2	2					2	Astronomy	2	1
											4	Chemistry	3	2	4	Chemistry, advanced	3	2
			1	Physiology	1	1												
															2	Stenography	3	2
Manual training		3	1	Manual Training		2	1	Manual Training		2	1	Drawing, freehand		2	1	Drawing		2
Drawing		2	1	Drawing		2	1	Drawing		2	1	Drawing, mechanical		2				

Approved:_____

Master Grade_____

_____

Head Master.

I wish _____

to take the studies underlined in Grade _____ (in case the Order of Exercises allows).

Signed _____

Parent or Guardian

2. Required work — English, including composition and declamation, is required in every grade. During the course for a diploma, a pupil must have received, in addition to English, a minimum of

4 credits in mathematics.
2 credits in science.
3 credits in history.

3. Special permission must be obtained to take courses amounting to less than twelve (12) credits in one year.

4. Those intending to enter college must take the five years' course in Latin.

5. Pupils preparing for college, scientific or normal schools, must consult the head master before choosing electives.

6. The number of pupils required to form a division will be

20 in Grade X.
15 in Grades XI and XII.
10 in Grade XIII.

With less than these numbers the study will not be given.

THE first announcement of awards in the educational department of the Paris Exposition to the United States of America has just reached us. The general official catalogue of the Universal International Exposition of 1900 enumerates 121 classes distributed through eighteen groups, of which Group I is education and instruction, comprising six classes, viz.:

1. Education of infants, primary instruction, instruction of adults.
2. Secondary instruction.
3. Higher instruction, scientific institutions.
4. Special instruction, artistic.
5. Special instruction, agriculture.
6. Special instruction, industrial and commercial.

Thirty political divisions are represented in the exposition of class 3, and about 900 exhibits are found in the revised list. France and colonies, including Algeria and Indo-China, have about 550 exhibits; United States 70, Hungary 65, Mexico 42, Russia 36, Italy 21, Great Britain 20, Portugal 20, Croatia and Slavonia 17, Japan 13, Belgium 11, Roumania 10, Greece, Guatemala, and Norway, 4 each; Austria, Bulgaria, Sweden, and Switzerland, 3 each; Bosnia-Herzezovina, Equador, Holland, and Servia, 2 each; and one each from China, Cuba, Spain, Monaco, Republic South Africa.

The jury passing on the awards to be assigned the exhibits is threefold; first, a jury of class comprising a certain number of French jurors designated by the commission, and at most an equal number of foreign jurors. The class jury's organization consists of a president, vice president (of other nation than the president), a reporter, and a secretary. The president, vice president, and reporter of the class juries comprise the members of the group jury, whose organization is completed by the election of a president, vice president, and secretary. Thus the jury of the first group will be composed of eighteen members, three from each of the six classes.

The presidents and vice presidents of the eighteen groups will be members of the superior jury with others provided by the commissioners.

The superior jury revises the work of the group jury and determines any appeals presented to it by the lower juries. The group jury revises the work of the class jury, and refers disputed questions not settled by the group to the superior jury. The class jury inspects the exhibits and assigns recompenses of five degrees, viz.:

1. Grand prix, the highest; then in order of merit.
2. Diplomes, etc., Medaille d'or.
3. Diplomes, etc., Medaille d'argent.
4. Diplomes, etc., Medaille de bronze.
5. Diplomes, etc., Medaille mention honorable.

On the completion of the work of inspection the class jury presents two lists: (*a*) a list of exhibits not competing by reason of the exhibitor being a member of a jury, or from other cause; (*b*) a list of the awards in alphabetic order, each diploma grouped by itself irrespective of country; *e. g.*, all the grand prizes, the gold medals, etc.

The jury of class 3, higher instruction and scientific institutions, completed its work on time, *i. e.*, on or before June 30, 1900. To the 900 exhibits it assigned 64 grand prizes, 92 gold, and 105 silver. The bronze and honorable mentions were naturally more numerous, and all may be changed slightly by revison. Twenty-seven grand prizes were given to French exhibits, 9 to United States, 5 to Great Britain, 3 each to Hungary, Japan, and Russia; 2 each to Belgium, Mexico, Roumania, and Italy; and 1 each to Austria, Canada, Croatia, Portugal, Norway, and Sweden; total, 64.

France received 44 gold prizes, United States 9, Russia 8, Hungary 6, Great Britain 5, Mexico 3, seven others 2, and three others 1; total, 92.

As the awards to the United States were in several instances collective, *i. e.*, one prize assigned to two or more exhibits each to receive the diploma if desired, the following detailed statement is given. The awards are grouped in order of merit, beginning with the highest, the grand prizes. The numbers prefixed are those of the official catalogue, and collective awards are connected by braces. In three instances on the personal motion of a French juror distinguished merit was recognized in individuals, viz., Professor H. A. Rowland, Johns Hopkins University; Professor Nicholas Murray Butler, Columbia University; and Director Melvil Dewey, University of the State of New York.

AWARDED TO THE UNITED STATES BY THE JURY OF CLASS 3

GRAND PRIZES

43 The section in its exhibits of superior instruction and scientific institutions.

37 } University of { Museum. Paleontological reports.
59 } the State of { Library. Traveling libraries, home education.
69 } New York { College. Professional education in the United States.

7 Congressional Library, Washington. Photographs and publications.

38, 52 Harvard — University. Publications, models, etc. Observatory. Photographs, observations, etc.
63 University of Pennsylvania. Archeologic expeditions.
53 Johns Hopkins University. Spectra, publications, etc. Collaborator Professor H. A. Rowland. Diffraction gratings, etc.
4 American Library Association. Publications, materials, and method. Collaborator Melvil Dewey, librarian and educator.

GOLD MEDALS

22 Denton Brothers. Collection and preservation of butterflies.
50, 28 Columbia — University. Photographs, publications, psychology. Teachers College. Higher normal school.
32 Massachusetts Institute of Technology. Programs and works.
49 University of Chicago. New departure of continuous sessions.
51 Cornell University. Section civil engineering.
5 Alumni Association of Colleges for Women. Higher instruction of women.
11, 18, 19 Illustrative — Bryn Mawr. Vassar. Wellesley.
29 *Educational Review*, Dr. Nicholas Murray Butler, editor.
47 University of California. Plans and prospects.
64 Princeton University. Photographs and publications.
65 Yale University. Sheffield Scientific School.

SILVER MEDALS

2 American Book Company. Publications in higher education.
1, 8, 9, 35, 39, 40, 67 Monographs on higher instruction in the United States —
1 B. B. Adams. Vacation schools and university extension.
8 M. Carey Thomas. Education of Women.
9 J. M. Cattell. Scientific associations.
35 T. C. Mendenhall. Scientific, technical, and engineering instruction.
39 James Russell Parsons, Jr. Professional education.
40 E. D. Perry. The American university.
67 A. F. West. The American college.
10 Cercle Français of Harvard and other universities.
62 New York University School of Pedagogy.
30 Foote Mineral Company. Collections of minerals for colleges.

BRONZE MEDALS

31 Hemment. Photographs of games and sports in American colleges.
45 Silver, Burdett & Co. Publications in higher instruction.
46 Dana Society of Natural History, Albany, N. Y. Publications.

HONORABLE MENTION

59 University of the State of New York.
Collective exhibit of — Chautauqua University. Brooklyn Institute. Pratt Institute. People's Institute. Rochester Athenæum.

Grand prizes 12, gold 14, silver 11, bronze 3, mention 5; total, 45.

HENRY L. TAYLOR, PH.D.,

Rapporteur Class 3, Universal International Exposition of 1900, United States Pavilion, Paris.

This is the official report as it reached us, but in the daily press of August 18th there is a much larger list, the particulars of which may be sent to us at a later date. Under the heading of the reipients of grand prizes or gold medals we find the name of this journal, the SCHOOL REVIEW, representing Secondary Education.

NEW PUBLICATIONS

The Young Folks' Cyclopædia of Persons and Places. By John Denison Champlin, A.M. With numerous illustrations. Size 6×8½ in.; pp. 958. New York: Henry Holt & Co.

The Finch First Reader. By Adelaide V. Finch, Normal Training School, Lewiston, Me. Size 7½×5¾ in.; pp. vi+145. Ginn & Co.

The Mother Tongue. Two volumes. Book I: Lessons in Speaking, Reading and Writing English. Book II: An Elementary English Grammar. By George Lyman Kittredge, Harvard University, and Sarah Louise Arnold, Supervisor of Schools in Boston. Size 7½×5¼ in.; pp. 320+321. Price, Book I, 55 cents; Book II, 70 cents. Ginn & Co.

Advanced Elementary Science. Being Part II of Systematic Science Teaching. By Edward Gardnier Howe. International Education Series. Size 7¼×5 in.; pp. x+373. Price, $1.50. New York: D. Appleton & Co.

How to Recite. A School Speaker. By F. Townsend Southwick, New York School of Expression. Cloth, 12mo, 464 pages. Price $1. New York: American Book Company.

Alice's Visit to the Hawaiian Islands. By Mary H. Krout. Cloth, 12mo, 208 pages. Price, 45 cents. American Book Company.

The Story of Ulysses. By M. Clarke. Cloth, 12mo, 283 pages. Illustrated. Price, 60 cents. American Book Company.

The True Citizen. How to Become One. By W. F. Markwick, D.D., and W. A. Smith, A.B. Cloth, 12mo, 259 pages. Price, 60 cents. American Book Company.

Specimens of the Forms of Discourse. Compiled and Edited by E. H. Lewis, Lewis Institute, Chicago. Size, 6¾×4¾ in.; pp. viii+367. Price, 60 cents. New York: Henry Holt & Co.

Frau Sorge. Roman von Hermann Sudermann. With Introduction and Notes by Gustav Gruener, Yale University. Size, 6¾×4¾ in.; pp. xvii+268. Price, 80 cents. New York: Henry Holt & Co.

School Chemistry. By Charles Baskerville, Ph.D., University of North Carolina. Size, 7½×5½ in.; pp. viii+151. Richmond, Va.: B. F. Johnson Pub. Co.

Some Birds and Their Ways. For Homes and Schools. By A. C. Webb. Illustrated. Size, 8×5½ in.; pp. 144. Richmond, Va.: The B. F. Johnson Pub. Co.

Romeo und Julia auf dem Dorfe. Von Gottfried Keller. Edited with Introduction and Notes by W. A. Adams, Ph.D., Dartmouth College. Size, 6½×4½ in.; pp. x+118, Price, 30 cents. D. C. Heath & Co.

Practical Composition and Rhetoric. By William Edward Mead, Ph.D., Wesleyan University, with the coöperation of Wilbur Fish Gordy, North School, Hartford, Conn. Size, 7×5 in.; pp. xxiv+367. Boston and Chicago: Sibley & Ducker.

The Story of Captain Meriwether Lewis and Captain William Clark. For Young Readers. By Nellie F. Kingsley. Size 7×5½ in.; pp. 128. Werner School Book Company.

Elements of Algebra. By Wooster Woodruff Beman, University of Michigan, and David Eugene Smith, State Normal School, Brockport, N. Y. Size, 7½×5 in.; pp. x+430. Ginn & Co.

Outlines of Economics. By Richard T. Ely. Ph.D., University of Wisconsin. Size 7½×5¼ in.; pp. xii+432. Price $1.25. The Macmillan Company.

Physiology for the Laboratory. By Bertha Millard Brown, S.B., State Normal School, Hyannis, Mass. Size, 7½×5¼ in.; pp. v+167. Ginn & Co.

Das Wirtshaus zu Cramsac. Novelle von Heinrich Zschokke. Edited with Introduction, Notes and Vocabulary, by Edward S. Joynes, South Carolina College. Size 6½×4½ in.; pp. xii+115. Price, 30 cents. D. C. Heath & Co.

The History of Language. By Henry Sweet, M.A. The Temple Primers. Size 6×4 in.; pp. xi+154. Price, 40 cents. The Macmillan Company.

The Lady of the Lake. By Walter Scott. Edited with Introduction and Notes by Elizabeth A. Packard, High School, Oakland, Cal. Size, 5¾×4¼ in.; pp. xlii+208. Price, 25 cents. The Macmillan Company.

Literary Interpretation of Life. By W. H. Crawshaw, Colgate University. Size, 7×5 in.; pp. viii+266. Price, $1. The Macmillan Company.

Discoveries and Explorers. By Edward R. Shaw, New York University. 12mo, 120 pages, illustrated. Price, 35 cents. American Book Company.

Child Life in Literature. A Fourth Reader. By Etta Austin Blaisdell and Mary Frances Blaisdell. Size, 7½×6½ in.; pp. 240. The Macmillan Company.

Four American Pioneers: Daniel Boone, George Rogers Clark, David Crockett, Kit Carson. A Book for Young Americans. By Frances M. Perry and Katherine Beebe. Illustrated. Size, 7½×5 in.; pp. 256. Price, 50 cents. Werner School Book Company.

Oriole Stories. For Beginners. By M. A. L. Lane. Size, 7½×5½ in.; pp. iv+86. Price, 33 cents. Ginn & Co.

The Care of the Child in Health. By Nathan Oppenheim. Size, 7½×5 in.; pp. 308. New York: The Macmillan Company.

A Term of Ovid. By Clarence W. Gleason, A.M. (Harvard), of the Roxbury Latin School. Size 7×5 in.; pp. v+209. Illustrated. Price, 75 cents. American Book Company.

Journalistic German: Selections from current German periodicals. Edited by August Prehn, Ph.D., Columbia Grammar School, New York. Size 7×5 in.; pp. 208 Price, 50 cents. American Book Company.

The Storied West Indies. By Frederick A. Ober. Illustrated. (Appleton's Home Reading Books.) Size, 7¼×4¾ in.; pp. xvi+291. Price, 75 cents. D. Appleton & Co.

The Chronicles of Sir John Froissart. By Adam Singleton. Illustrated. (Appleton's Home Reading Books). Size, 7¼×4¾ in.; pp. xxxiv+235. Price, 75 cents. D. Appleton & Co.

Stories of the Great Astronomers. By Edward S. Holden, Sc.D. Illustrated. (Appleton's Home Reading Books). Size, 7¼×4¾ in.; pp. xxiv+255. Price, 75 cents. D. Appleton & Co.

Rome: Its Rise and Fall. By Philip Van Ness Myers, L.H.D. Illustrated. Size 7½×5 in.; pp. xii+554. Price $1.25. Ginn & Co.

Popular Astronomy — being the new descriptive Astronomy. By Joel Dorman Steele, Ph.D. Revised by Mabel Loomis Todd. Cloth, 12mo, pp. 349, illustrated. Price $1. American Book Company.

Art History in the High School. By George Perrot. Translated from the *Revue des Deux Mondes*, by Sarah Wool Moore. Pp. 43. C. W. Bardeen, Syracuse.

History of English and American Literature. By Chas. F. Johnson, Professor of English Literature in Trinity College, Hartford. Cloth, 12mo, pp. 552, illustrated. Price $1.25. American Book Company.

The Bellum Catilinæ of C. Sallustius Crispus. Edited by C. G. Herbermann, of the College of the City of New York. Cloth, 12mo, pp. xiv×192. Price $1. B. H. Sanborn & Co., Boston.

La Verre d'Eau. Edited by Charles A. Eggert. (Heath's Modern Language Series.) Size 6½×4½ in.; pp. x+138. Price 30 cents. D. C. Heath & Co.

Er ist nicht Eifersüchtig (Elz.). Edited by Benjamin W. Wells. (Modern Language Series.) Size 6½×4½ in.; pp. 57. Price 20 cents. D. C. Heath & Co.

Nein (Benedix). Edited by Arnold Werner — Spanhoofd. (Modern Language Series.) Size 6½×4½ in.; pp. 69. Price 25 cents. D. C. Heath & Co.

Cornell Studies in Classical Philology, No. XI. Index in Xenophontis Memorabilia Confecerunt Catherina Maria Gloth et Maria Francisca Kellog. Size 9×6 in.; pp. 96. The Macmillan Company.

No. XII. A Study of the Greek Pæan. By Arthur Fairbanks, Ph.D. Size 9×6 in.; pp. 166. The Macmillan Company.

Introduction to Zoölogy — for the use of secondary schools. By C. B. Davenport, Assistant Professor of Zoölogy in the University of Chicago, and G. C. Davenport, formerly Instructor in Zoölogy at the University of Texas. Size 7½×5 in.; pp. vii+412, illustrated. Price $1.10. The Macmillan Company.

Memory — An Inductive Study. By F. W. Colegrove, Professor of Philosophy in the University of Washington. With an Introduction, by G. Stanley Hall. Cloth, 12 mo, pp. xii+369.

School Arithmetic. Primary Book. By John M. Colaw and J. K. Elwood. (Johnson Series.) Cloth, 12mo, pp. xii+271. Price 35 cents. B. F. Johnson Publishing Company, Richmond, Va.

School Arithmetic. Advanced Book. By John M. Colaw and J. K. Ellwood. Half morocco, 12mo, pp. 442. Price 60 cents. B. F. Johnson Publishing Company, Richmond, Va.

The Christ of Cynewulf. Translated into English prose, by Charles Huntington Whitman, Fellow in English, of Yale University. Cloth, 12mo, pp. vi+62. Ginn & Co.

An Elementary Physics for Secondary Schools. By Charles Burton Thwing, Professor of Physics in Knox College. Size 7¾×5½ in.; pp. xii+371. Benjamin H. Sanborn & Co., Boston.